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## PAPERS AND PROCEEDINGS

OF THE

*Sixty-sixth Annual Meeting*

OF THE

## AMERICAN ECONOMIC ASSOCIATION

*Washington, D.C., December 28-30, 1953*

*Edited by James Washington Bell, Secretary of the Association*

*and*

*Gertrude Tait, Executive Assistant*

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## FOREWORD

The 1953 program represented a co-operative effort by the participants to assess the fundamental nature of the American economy at the current point in time. Except for a limited number of sessions which were included at special request, all sessions addressed themselves to a closely intertwined series of questions. The first of these questions was that of the extent to which the economy is still characterized by competition and laissez faire. Just as basic was the question of whether competition has not become organizational in character rather than individualistic.

Related questions involving the corporate or organizational versus the individualistic character of the savings-investment process, the taxing process, and the process by which full employment may be maintained were examined in other sessions. Still another session dealt with the changing role of the entrepreneur.

Several sessions were devoted to considering whether or not the development of the organizational type of economy, accompanied by governmental intervention and control, had in fact resulted in the allocation of resources and the compensation of factors substantially different from that which would have been expected under the orthodox competitive model.

Another group of sessions was devoted to an analysis of the potentialities and limitations of the use of organized economic power in altering distributive shares and factor compensation. As a corollary, the question was raised as to the extent to which declining inequality in the distribution of the national income is related to the growth of organized economic power.

One session was devoted to a consideration of the evidence concerning the effect of the development of the organizational economy upon innovations in technology. Another session dealt with "growth decisions" in the current type of economy.

A related series of questions was raised in the international economic sphere. One session was devoted to an analysis of corporate international investment. Another was devoted to an analysis of the kind of economic philosophy reflected in the reports of missions of the United Nations and of the International Bank to underdeveloped countries. Most fundamental of all in this sphere was a session devoted to the basic question raised by Viner in his *International Economics* (1951): "The world has changed greatly, and is now a world of planned economies, of state trading, of substantially arbitrary and inflexible national

price structures, and of managed instability in exchange rates. The classical theory is not directly relevant for such a world and it may be that for such a world there is and can be no relevant general theory."

Participants in the various sessions were asked to consider to what degree they considered it necessary for current economic theory to take into account changes away from conditions assumed to exist if the standard competitive model was to be relevant.

The presidential address, published in the regular issue of the *Review,* attempted to outline the *rationale* of the program. Further, the address analyzed the problem of the decline in the "automaticity" in the regulation of the economy involved in its increasingly organizational character and the consequent growth in the role of the state in the control of the economy.

# PROGRAM OF THE SIXTY-SIXTH ANNUAL MEETING OF THE AMERICAN ECONOMIC ASSOCIATION

Washington, D.C., December 28-30, 1953

This year's session was arranged on an independent basis, in accordance with the plan of rotation agreed upon by the representatives of the Allied Social Science Associations. The associations choosing to meet in Washington at the same time and with whom we arranged to sponsor sessions were the American Statistical Association, the Industrial Relations Research Association, the American Finance Association, and the American Marketing Association. Ten of these co-sponsored sessions are not referred to in this program, though some of them are mentioned incidentally in the discussion papers. The sessions listed are those which we initiated and are our responsibility except the sessions on transportation and public utilities, organized by members of our own Association interested in these fields, and the luncheon meeting arranged in co-operation with the American Finance Association.

**Monday, December 28, 1953**

**10:00 A.M.**

***Meeting of the Executive Committee***

**12:00 M.**

***Luncheon Meeting of the Executive Committee***

**2:30 P.M.**

***Fundamental Characteristics of the American Economy: Degrees of Competition, of Monopoly and of Countervailing Power: Theoretical Significance***

*Chairman:* EDWARD H. CHAMBERLIN, Harvard University

*Papers:* J. K. GALBRAITH, Harvard University; GEORGE J. STIGLER, Columbia University; JOHN PERRY MILLER, Yale University

*Discussion:* DAVID MCCORD WRIGHT, University of Virginia; M. A. ADELMAN, Massachusetts Institute of Technology; FRANK J. KOTTKE, Federal Trade Commission

***An Appraisal of Economic Change***

*Chairman:* MILTON S. HEATH, University of North Carolina

*Papers:* ARTHUR H. COLE, Harvard University; ROSS M. ROBERTSON, Federal Reserve Bank of St. Louis

*Discussion:* FRANK H. KNIGHT, University of Chicago; ANDREAS PAPANDREOU, University of Minnesota

***Institutional Aspects of Saving and Investment***

*Chairman:* LESTER V. CHANDLER, Princeton University

*Papers:* WALTER A. MORTON, University of Wisconsin; JAMES J. O'LEARY, Life Insurance Association of America; E. S. SHAW, Stanford University

*Discussion:* SUSAN S. BURR, Board of Governors of the Federal Reserve System; BURTON C. HALLOWELL, Wesleyan University

**8:30 P.M.**

***Factor Markets Versus Product Markets: Is the American Economy More Competitive in the Long Run Than in the Short Run?***

*Chairman:* KENNETH E. BOULDING, University of Michigan

*Papers:* G. WARREN NUTTER, Yale University; ARNOLD C. HARBERGER, University of Chicago

*Discussion:* SIDNEY S. ALEXANDER,[1] Columbia Broadcasting System; RUTH P. MACK, National Bureau of Economic Research; JOEL DEAN,[1] Columbia University

***Diminishing Inequality in Personal Income Distribution: Relation to Functional Distribution and Factor Compensation*** (Joint session with the American Statistical Association)

*Chairman:* WILLIAM H. STEAD, Washington, D.C.

*Papers:* GEORGE GARVY, Federal Reserve Bank of New York; EDWARD F. DENISON, Department of Commerce

*Discussion:* ALLAN M. CARTTER, Duke University; SELMA F. GOLDSMITH, Department of Commerce; MARGARET G. REID, University of Chicago; ALFRED H. CONRAD, Harvard University

[1] No manuscript received.

***Technological Progress and Economic Institutions***
*Chairman:* ROBERT D. CALKINS, The Brookings Institution
*Papers:* IRVING H. SIEGEL, Twentieth Century Fund; W. RUPERT MACLAURIN, Massachusetts Institute of Technology
*Discussion:* WALTER ADAMS, Michigan State College; HANS BREMS, University of California; VINCENT F. BOLAND, University of Arizona

***Economic Implications of an Aging Population: Review of University of California Research Project*** (Joint session with the American Statistical Association)
*Chairman:* EVELINE M. BURNS, Columbia University
*Papers:* ROBERT DORFMAN, University of California; PETER O. STEINER, University of California; MELVIN W. REDER, Stanford University
*Discussion:* FLOYD A. BOND, Pomona College; ELISABETH WALLACE, University of Toronto

**Tuesday, December 29, 1953**
**9:30 A.M.**

***Industrial Pricing: Institutional Practices Versus Abstract Models***
*Chairman:* EDWARD S. MASON, Harvard University
*Papers:* RICHARD B. HEFLEBOWER, Northwestern University; RICHARD RUGGLES, Yale University
*Discussion:* JESSE W. MARKHAM, Federal Trade Commission; VERNON A. MUND, University of Washington; HENRY M. OLIVER, Indiana University

***Farm Prices and Farm Incomes in American Agriculture: Is American Agriculture Still Essentially Competitive and Laissez Faire?*** (Joint session with the American Farm Economic Association)
*Chairman:* FRANK J. WELCH, University of Kentucky
*Papers:* M. R. BENEDICT, University of California; D. GALE JOHNSON, University of Chicago
*Discussion:* ORIS V. WELLS,[1] Agricultural Marketing Service; GLENN L. JOHNSON, Michigan State College; H. B. JAMES, North Carolina State College

***Corporate International Investment Policies and Programs***
*Chairman:* JOHN B. CONDLIFFE, University of California
*Papers:* AUGUST MAFFRY, Irving Trust Company; FRANCIS MCINTYRE, California Texas Oil Company
*Discussion:* VINCENT W. BLADEN, University of Toronto; H. J. DERNBURG, Federal Reserve Bank of New York

***Wage Determination in the American Economy: Potentialities and Limitations in the Use of Collective Economic Power in Varying the Compensation of Labor and Capital***
*Chairman:* JOHN T. DUNLOP, Harvard University
*Papers:* CLARK KERR, University of California; MARTIN BRONFENBRENNER, University of Wisconsin; HAROLD M. LEVINSON, University of Michigan
*Discussion:* JOHN P. TROXELL, Stanford University; PHILIP TAFT, Brown University

**12:30 P.M.**

***Luncheon Meeting*** (Joint session with the American Finance Association)
*Address:* W. RANDOLPH BURRGESS,[2] Treasury Department

**2:30 P.M.**

***Big Unions and Inflation: Alternative Possibilities of Inflationary Pressures and Higher Cost Bottlenecks in an Economy of Large Bargaining Units and of Less Than Pure and Perfect Competition in the Marketing of Products*** (Joint session with the Industrial Relations Research Association)
*Chairman:* J. DOUGLAS BROWN, Princeton University
*Papers:* SUMNER H. SLICHTER, Harvard University; C. L. CHRISTENSON, Indiana University
*Discussion:* ALBERT REES, University of Chicago; GUY E. NOYES, Board of Governors of the Federal Reserve System

***The Role of Corporate Taxation in the American Economy***
*Chairman:* ROY BLOUGH, United Nations
*Papers:* GERHARD COLM, National Planning Association; J. KEITH BUTTERS, Harvard University; JOHN LINTNER, Harvard University
*Discussion:* B. U. RATCHFORD, Duke University; MABEL NEWCOMER, Vassar College; JAMES K. HALL, University of Washington

[2] Published in the March, 1954, issue of the *Journal of Finance.*

*Round Table Discussion of the Bowen Report on Graduate Training in Economics*
*Chairman:* JOHN PERRY MILLER, Yale University
*Participants:* HOWARD R. BOWEN, Williams College; ROBERT D. CALKINS, The Brookings Institution; THOMAS H. CARROLL, Ford Foundation; JAMES S. EARLY, University of Wisconsin; ALBERT G. HART, Columbia University; WALTER W. HELLER, University of Minnesota; WALTER E. HOADLEY, JR., Armstrong Cork Company; FRITZ MACHLUP, Johns Hopkins University; JACOB MARSCHAK, University of Chicago; ARTHUR SMITHIES, Harvard University; JOSEPH J. SPENGLER, Duke University; GEORGE W. STOCKING, Vanderbilt University; WILLARD L. THORP, Amherst College

*National Transportation Policy* (Session arranged by the group interested in transportation and public utilities)
*Chairman:* I. L. SHARFMAN, University of Michigan
*Papers:* CHARLES L. DEARING,[3] The Brookings Institution; SIDNEY L. MILLER, University of Pittsburgh
*Discussion:* GEORGE P. BAKER, Harvard University; LIONEL W. THATCHER, University of Wisconsin

8:00 P.M.
*Presidential Address*
*Chairman:* EARL J. HAMILTON, University of Chicago
*Paper:* CALVIN BRYCE HOOVER,[4] Duke University

Wednesday, December 30, 1953
9:30 A.M.
*Economic Doctrines Implied in the Reports of the United Nations and of the International Bank for Reconstruction and Development on Underdeveloped Countries*
*Chairman:* PAUL T. ELLSWORTH, University of Wisconsin
*Papers:* RAYMOND F. MIKESELL, University of Virginia; JOSEPH J. SPENGLER, Duke University
*Discussion:* WILFRED MALENBAUM, Massachusetts Institute of Technology; THEO SURÁNYI-UNGER, Syracuse University; GERALD M. ALTER, International Bank for Reconstruction and Development

*Regional Wage Differentials in an Economy of Large Bargaining Units and Less Than Pure and Perfect Competition in the Marketing of Products* (Joint session with the Industrial Relations Research Association)
*Chairman:* H. GORDON HAYES, Tulane University
*Papers:* SEYMOUR E. HARRIS, Harvard University; JOHN V. VAN SICKLE, Wabash College
*Discussion:* WALTER ISARD,[1] Massachusetts Institute of Technology; J. FRED HOLLY, University of Tennessee; BEN A. ROGGE, Wabash College; LOUIS B. PERRY, Pomona College

*The Automaticity of Full Employment Under the Assumption of Diminished Defense Expenditures*
*Chairman:* GROVER W. ENSLEY, Joint Committee on the Economic Report
*Papers:* ALBERT G. HART, Columbia University; GEORGE H. HILDEBRAND, University of of California; WILLIAM FELLNER, Yale University
*Discussion:* CLARENCE E. PHILBROOK, University of North Carolina; KENNETH D. ROOSE, Oberlin College

2:30 P.M.
*Economic and Regulatory Problems of the Broadcasting Industry* (Session arranged by the group interested in transportation and public utilities)
*Chairman:* MARVIN L. FAIR, Tulane University
*Papers:* H. H. GOLDIN, Federal Communications Commission; RONALD H. COASE, University of Buffalo
*Discussion:* SIDNEY S. ALEXANDER, Columbia Broadcasting System; PETER O. STEINER, University of California

*The Theory of International Trade in a World of Trade Barriers and Controls and of Variegated National Economic Systems*
*Chairman:* JOHN H. WILLIAMS, Harvard University
*Papers:* GOTTFRIED HABERLER, Harvard University; DON D. HUMPHREY, Duke University

[3] The full text of this paper appeared in the *I.C.C. Practitioners' Journal*, January, 1954, and in *Railway Progress*, March, 1954.
[4] Published in the March, 1954, issue of the *American Economic Review*.

*Discussion:* John H. Adler, International Bank for Reconstruction and Development; Richard M. Bissell, Jr.,[1] Massachusetts Institute of Technology; George A. Elliott, University of Toronto

***Growth Decisions in the American Economy***

*Chairman:* George W. Stocking, Vanderbilt University

*Papers:* Edgar M. Hoover, Washington, D.C.; Joseph Shister, University of Buffalo

*Discussion:* James M. Buchanan, Florida State University; J. Curt Victorius, Guilford College; Howard R. Bowen, Williams College

***Round Table on Economics in General Education***

*Chairman:* Ben W. Lewis, Oberlin College

*Participants:* Clark Lee Allen, Florida State University; S. P. McCutchen, New York University; E. T. Weiler, Purdue University; Edwin G. Nourse, Washington, D.C.

**5:00 P.M.**

***Business Meeting***

**6:00 P.M.**

***Dinner Meeting of the Executive Committee***

THE purpose of the American Economic Association, according to its charter, is the encouragement of economic research, the issue of publications on economic subjects, and the encouragement of perfect freedom of economic discussion. The Association as such takes no partisan attitude, nor does it commit its members to any position on practical economic questions. It is the organ of no party, sect, or institution. Persons of all shades of economic opinion are found among its members, and widely different issues are given a hearing in its annual meetings and through its publications. The Association, therefore, assumes no responsibility for the opinions expressed by those who participate in its meetings. Needless to say, the papers presented are the personal opinions of the authors and do not commit the organizations or institutions with which they are associated.

JAMES WASHINGTON BELL
*Secretary*

# FUNDAMENTAL CHARACTERISTICS OF THE AMERICAN ECONOMY

## Degrees of Competition, of Monopoly, and of Countervailing Power; Theoretical Significance

## COUNTERVAILING POWER

*By* John Kenneth Galbraith
*Harvard University*

### I

One is greatly favored in being allowed to speak about a book which he himself has written. He can fairly claim to be an authority on what the author said or meant to say. He is not expected to conform to especially high standards of scientific detachment. On the contrary, a certain partiality and even admiration for the work under discussion is permissible—in fact commonplace.

The only problem of such a speaker, in fact, is what to say. Obviously, if he has any bright ideas on the subject, he should have had them when he wrote the book.

My own solution to this latter problem is to confine my observations on countervailing power to an introductory word and give my attention largely to my critics. To some of these I have long been wanting to address a loving word.

### II

We are concerned here with the oldest of economic problems—that of the mitigation or regulation of economic power. Anciently, two solutions have been recognized to the problem of economic power. One is competition. The other—always assuming that anarchy and exploitation are not solutions—is regulation by the state. I have argued that there is a third mitigant of substantial, and perhaps central, importance in our time. That is the neutralization of one position of power by another.

The focus of the use and also of the abuse of economic power is the market. Competition mitigates economic power by making the behavior of any participant in the market contingent on the behavior of other and like participants. It makes sellers subject to the independent actions of other sellers, and buyers subject to the independent action of other buyers. The undoubted effect is to limit or dissolve the opportunity for arbitrary, or self-interested, or perhaps any effective use of market power

which would limit or lower the real income of others. With the decline of independent market behavior—or perhaps more accurately its decay as a plausible assumption—a gap has been left in our explanation of the operative mechanics by which the economy is governed. This gap has certainly not been filled by the state in any general way. I have argued that economic power has been mitigated—the gap filled—by countervailing power. Those who are subject to the aggressions of economic power—to a monopoly or to a strong buyer of their labor or of their products—have both a negative and a positive incentive to organize resistance. They are impelled to do so for their protection; they are encouraged to do so by the prospect of splitting off some of the gains associated with the original power position. The methods of organizing this answering bargaining power—this countervailing power—are exceedingly various. Yet a broad identity of motive and of result seems to me evident. It has become a significant and perhaps a principal reliance of the weak seller or the weak buyer when faced with a strong position across the market.

I have ventured to suggest that much recent controversy over labor and farm policy and over many of the interstitial market relationships—those between large sellers and mass buyers for example—become intelligible only in light of the implicit recognition of economic groups of the importance of countervailing power.

## III

Now for the criticism. Let me make clear at the outset that I have no serious ground for complaint at the way these ideas, in their more developed form, have been received. The number who have objected, per se, to an economist's playing with reality has so far seemed quite surprisingly small. And we must have men who resist any tampering with the rigidly idealized world of our ancestors. They do not contribute to movement. But they do provide a valuable benchmark by which we can measure progress.

From my own somewhat biased vantage point, I have had no sense whatever of the equal and opposite danger of a too ready and uncritical acceptance of a new viewpoint.

As a result of such criticism, were I now so engaged, I would want to revise my contentions on two or three important points. I fear I did not make as explicit as I should the welfare criteria I was employing. In partial equilibrium situations, economics has long made the maximization of consumer welfare a nearly absolute goal. Any type of economic behavior which lowered the prices of products to the consumer, quality of course being given, is good. This standard weighs heavily on the conscience of the economist.

There is much history behind this standard. Economics originated in

a world that was very poor—where bleak poverty was the normal lot of man and always had been. Increased real income of consumers was the simplest test of improved welfare. There was a strong pragmatic justification for this test and for a policy which justified no breaches. The particular could easily become the general and even the particular could not be afforded.

In our own time, however, we regularly reject the particular equilibrium test of maximized consumer well-being. We regularly accept measures which raise product prices to ameliorate the grievances or alleviate the tensions of some social group. And it is well that we do. An opulent society can afford to sacrifice material well-being for social contentment. Higher prices of coal or clothing we regard as a small price for freedom from disorder in the coal fields or destitution in the sweatshops.

I doubt whether, in entering a defense of the social utility of countervailing power, I made sufficiently clear whether my standard was the welfare of the consumer or the minimization of social tension. It was natural that perceptive critics would take up the attack on the test of consumer welfare. Had I been less under the influence of this norm myself I would have invited the battle in the area of social harmonies. This, I submit, is also the critical test. American society has not recently been threatened in peacetime (or even in wartime) by a shortage of food. There have been times when the tensions of the farming community were a threat to orderly democratic process. The evolution of countervailing power in the labor market has similarly been a major solvent of tensions in the last half-century. Most would now agree, I think, that this has been worth a considerable price.

I am also grateful to numerous critics for a second correction. I have argued that one important manifestation of countervailing power—different in form but not in kind from that exercised against the cartels by the great European consumer co-operatives—is that of the modern mass buyer. The gains from this bargaining by the chains, department store buying groups, the great mail order houses, and the like are, in turn, passed along to the consumer. The consumer, as a result, is in a far happier position than were he or the small independent merchant to bring his negligible bargaining power to bear on the characteristic market power of the large manufacturer or processor.

The gains from opposing mass retail buying to large-scale or oligopolistic production have, I think, been fairly generally conceded. The question has been asked, however, as to what eleemosynary instinct causes the gains that are won by the mass buyer to be passed along to the consumer. In my book I argued that it was the result of the shape of the production function in retailing. My critics have suggested that it is because retailing, the mass buyers notwithstanding, is still a competitive industry. (It is likely to remain one, for entry is almost in-

herently easy.) I suspect they are right. I am sure that I was more than a little reluctant, at this particular stage in my argument, to confess a reliance on competition. After all, it is a bit embarrassing after one has just murdered his mother-in-law to disinter the lady and ask her to help do the cooking.

## IV

I come now to some critical views which I regard with somewhat less sympathy. There are first the professional protectors of scholarly virtue in our subject. These are the men who remind us that we have said nothing new—that it is all to be inferred from the writings of Aristotle, St. Thomas Aquinas, Adam Smith, and the late John R. Commons. I shall pass these critics by. These are times, I understand, when men are fired if they can be shown to have lost their humility.

There are also the self-designated protectors of our political morality. They detect in such a concept as countervailing power the evidence of a hidden and insidious design. Their evidence may be indistinct, but their knowledge of motives is unerring. I have been amazed at some of my motives. I have been detected as supplying a mask for monopoly and a rationale for big business. (That was an economist in the *Nation.*) I have also been constructing an apologia for the New Deal and the welfare state. (That was another economist, *sic,* in the *Chicago Tribune.*) Perhaps we should be grateful for these men and to the scholarly journals in which they speak. They warn us of bad intentions and evil plots of which we are not aware. They protect us from guilt by innocence.

There have been two less romantic criticisms which I am obliged to take more seriously.

The first of these concedes the reality of countervailing power but holds that its manifestations are imperfect. It can be circumvented by vertical integration or defeated by inflation.

This I readily concede, and I am only surprised that the point should be advanced in criticism either of my book or the concept. As with competition, the role of countervailing power is uneven, as I have been at pains to make clear. The extent of its effect is essentially, as with competition, a quantitative matter. Apparently our tradition in economic analysis does not allow us to construct partial models of this sort. They must be complete, self-consistent, and harmonious. If the model-builder does not make this claim, then his critics will assume that he does anyhow and then isolate the imperfections as proof of weakness.

I have been especially struck by this mental habit as it bears on my analysis of countervailing power and inflation. An economy characterized by countervailing power seems to me especially susceptible to in-

flation. Then, as the demand functions become generally inelastic, there is an opportunity for coalitions between those whose interests are otherwise opposed in bargaining, and the inflationary process is accelerated. Countervailing power dissolves as a regulatory force and it is for this reason—and in a manner quite consistent with what we would expect from our a priori view of regulatory process—that there is a tendency at such times to turn to state regulation of prices and wages to fill the regulatory void. It is significant that it has been in periods of inflation rather than deflation that the American and other similar economies have been made subject to a system of comprehensive government regulation.

In making this clear I seem to have invited—in this case even from such a perceptive journal as the *Economist*—the charge that my argument is weak. In conceding the imperfections or malfunctioning of countervailing power I am apparently made responsible for it. Such criticism, in effect, requires that the social phenomenon described be both universal in application and socially benign in effect. This is silly.

## V

Many, although not quite all, of those who have followed me through the concept of countervailing power would appear to agree that, given a strong position of market power, an answering position is desirable—that it contributes to social stability and perhaps also to economic efficiency. But a good many have, it is certain, been honestly appalled by this solution. It seems, in the first place, to legitimatize market power. To many of us the notion that one individual shall be in position to control the real income of others remains more than slightly obscene. We react to it much as a Puritan to Professor Kinsey—adultery exists no doubt, but how much better not to talk about it.

The further notion of a society which finds its equilibrium in a struggle between organized power groups is also unattractive—and such an equilibrium must look inherently unstable.

Finally, there is a suspicion that the concept of countervailing power will somehow provide an excuse for abandoning antitrust enforcement. In recent times we have had quite a number of quite ingenious arguments for ditching the antitrust laws. Is this another?

These arguments—one will find them persuasively advanced in Professor Adams' interesting article in the current *Quarterly Journal of Economics*—are not without point. If economic power could be totally mitigated by law, a hope that is at least implied by Professor Adams, the case against accepting countervailing power as a fact of life might be strong. However, the practical question is, what is practical? We know—and here our debt to our chairman, Professor Chamberlin, is

great—that economic power in the economy is pervasive. It goes far beyond the limits set by the classical concepts of monopoly. It is an attribute of large-scale enterprise, the most striking characteristic of the American economy. Are we, by legislative and judicial action, going to work a revolution in the American economy? The answer is no.

The answer being no, we must then cherish the safeguards by which inherently weaker groups have found protection—labor from the perishability of its product and its unique compulsion to sell, the farmer from the tendency for the terms of trade to turn so adversely with any drop in demand, and so forth. This protection is not perfect. The economy is far more viable and its tensions are greatly alleviated because this protection exists.

This—as I have made clear—does not mean an end to the antitrust laws. It does suggest some discrimination in their use. In particular, it explains why we do not now apply them to unions and to agricultural price fixing where, implicitly at least, we recognize the role of countervailing power.

Unrestrained economic power is still an enemy of the good society. I only urge that we have a full view of the processes by which it is restrained.

# THE ECONOMIST PLAYS WITH BLOCS

*By* George J. Stigler
*Columbia University*

Professor Galbraith says, of his theory of countervailing power, that "the contention I am here making is a formidable one." He adds:

> It comes to this: Competition which, at least since the time of Adam Smith, has been viewed as the autonomous regulator of economic activity and as the only available regulatory mechanism apart from the state, has, in fact, been superseded . . . in the typical modern market of few sellers, the active restraint is provided not by competitors but from the other side of the market by strong buyers.[1]

Indeed even this is an understatement of the significance of the theory, for it explains not only how the "typical," noncompetitive markets operate but also how our industrial structure evolves—why we have labor unions, large retail organizations, and an agricultural bloc. As if this is not enough work for one theory, it is also a fairly comprehensive theory of government, for "in fact, the support of countervailing power has become in the last two decades perhaps the major peacetime function of the federal government" (page 142).

My task here is to appraise the validity of this ambitious theory. It seems useful to begin with a survey of the main allegations of economic life on which the theory appears to rest. Thereafter, the theory and its empirical validity are examined and a few concluding remarks are devoted to the policies which it or its author endorses.

## I. *The Weltanschauung*

Three views that Galbraith shares with many economists provide the raw material of the theory of countervailing power.

The first view is that the American economy is outstanding in its efficiency and progressiveness. In recent years many economists have become increasingly proud of our economic system—proud of the high income of the average citizen, proud of the absence of large fluctuations in real income or employment in the last decade, and proud of the powerful march of progress. Galbraith states it thus:

> We find ourselves in these strange days with an economy which, on grounds of sheer physical performance, few are inclined to criticize. Even allowing for the conformist tradition in American social thought, the agreement on the quality of the performance of American capitalism is remarkable. (Page 8.)

[1] *American Capitalism: The Concept of Countervailing Power* (New York, 1952), p. 119.

The second view is that the American economy is dominated by large business concerns, or, more concretely, oligopoly is typical in our basic industries. Galbraith stated this view most firmly a few years ago: ". . . oligopoly is the appropriate assumption in dealing with industrial markets in the United States."[2] His current statement is more moderate, perhaps because of an intervening decline in concentration: ". . . over an important sector of the American economy individual markets are shared by a small number of producers" (page 42).

One reared on the neoclassical theory of monopoly, with its emphasis upon the tendency of monopoly to lead to misallocation of resources and bureaucratic and perhaps lethargical business organization, may feel that these views are hard to reconcile, and yet many economists besides Galbraith accept both views. If reconciliation is attempted, conventionally it takes one of two paths. One may deny that the modern oligopolists possess any substantial monopoly power—one version of workable competition—or one may argue, with Schumpeter, that the oligopolies and monopolies are part of the mechanism of progress.

But if one deems it profitable to argue on so general and yet so limited a basis (and I do not), it is to be observed that no reconciliation with the conventional theory of monopoly is necessary. If our economy is good, it is so relative to other economies, say the British or the French or the German. But then it seems relevant to notice that these economies have higher concentration in manufacturing and in general pursue more open and more effective collusive policies. A paradox would arise only if our economy were especially, or at least predominantly, concentrated or monopolized—and it is not.

The third view, which gives Galbraith's theory its special flavor, is that the major sectors of our economy are organized into powerful economic units—giant firms, giant labor unions, great retail chains, agricultural blocs, and the like—and that important economic decisions are made by individual firms or blocs whose powers far transcend simple adaptation to impersonal market forces. We may note that Galbraith's version differs somewhat from what I take the more popular view of this matter to be. The more popular version is that decisions are increasingly being made by all manufacturing versus all labor versus all farmers, whereas Galbraith stresses the importance of concentrations of power in individual markets.

These basic views are worth keeping in mind, not because they permit any judgment on the validity of Galbraith's theory, for they do not, but because it is their apparent reconciliation that commends Galbraith's theory to some economists. If the theory had been advanced in the thirties, when the quality of the American economy was even

[2] *A Survey of Contemporary Economics*, ed. by H. S. Ellis, p. 107.

more seriously undervalued than today it is overvalued, the theory would have attracted no one—and this is true despite the fact that Galbraith himself argues that his theory is applicable chiefly in unprosperous periods. But enough of preliminaries; let us look at the theory.

## II. *The Thesis: Countervailing Power*

The major thesis of Galbraith's work is that countervailing power emerges in response to the monopolistic and especially the oligopolistic organization of industries, and this power is exercised in such a way as to preserve the economy from undue exactions and restraints. In his own words:

> The fact that a seller enjoys a measure of monopoly power, and is reaping a measure of monopoly return as a result, means that there is an inducement to those firms from whom he buys or those to whom he sells to develop the power with which they can defend themselves against exploitation. It means also that there is a reward to them, in the form of a share of the gains of their opponents' market power, if they are able to do so. In this way the existence of market power creates an incentive to the organization of another position of power that neutralizes it. (Page 119.)

It is natural to ask why the operation of the economy is improved when a monopsonist or a set of oligopsonists arises and shares the gains of a previously unhampered monopolist or set of oligopolists. Galbraith's basic answer is that the newly arrived oligopolists use their power to reduce prices to consumers. Thus in the above passage he says the original monopoly power is "neutralized," and later he refers to the large retail organizations which "developed the countervailing power which they have used, by proxy, on behalf of the individual consumer . . ." (page 131). And this is the entire explanation!

We must regret that at the very threshold of the doctrine of countervailing power, Galbraith eschews rational explanation. It is not as if one were asking, in the tones of a stuffy formalist, for explicit development of details of a theory whose general outline is familiar or which is a plausible extension of well-explored theories. The theory of bilateral oligopoly can hardly be said to exist, and the theory of bilateral monopoly—which Galbraith disposes of in a singularly high-handed manner (page 120n.)—offers only contradictions to his theory. On the basis of our existing theories, I would expect bilateral oligopoly to be relatively monopolistic in operation. It would tend more toward competition, the greater the numbers and the easier the entry into both industries, and the outcome would also be affected by such factors as the symmetry of the opposing parties.[3] But it simply is romantic to believe that a competitive solution will emerge, not merely in a few peculiar cases, but in the general run of industries where two small

[3] That is, the comparative ranges of output of buyers and sellers. It is easier for automobile firms to produce steel than for steel firms to produce automobiles; so the bargaining power of the former is greater.

groups of firms deal with one another: suddenly all the long-run advantages of monopolistic behavior have been lost sight of in a welter of irrational competitive moves. I have most serious doubts that anyone can devise a rational explanation for Galbraith's proxy-minded oligopolists.

Nor is our confidence in the theory increased by the scope which Galbraith assigns to its validity:

> Countervailing power, as a restraint on market power, *only* operates when there is a relative scarcity of demand. Only then is the buyer important to the seller and this is an obvious prerequisite for bringing his power to bear on the market power of the seller. If buyers are plentiful, that is, if supply is small in relation to current demand, the seller is under no compulsion to surrender to the bargaining power of any customer. The countervailing power of the buyer, however great, disappears with an excess of demand. (Page 136.)

These oligopolists are not selling at market clearing prices. Instead of creating a "scarcity of demand" by charging higher prices, they choose not to exercise their monopoly power. Instances of such behavior have occurred in recent years, although not with sufficient frequency to prevent inflation. Galbraith should in consistency hail the oligopolists who refuse to charge as much as buyers offer, for these oligopolists have countervailed themselves. Galbraith should for completeness also explain why the corresponding preponderance of buyers' power in depressions is not equally objectionable. On the more comprehensible theory that most of the rest of the regiment marches to, prices that do not clear markets have socially undesirable effects on the allocation of outputs and resources at all times.

Galbraith offers a second, less explicit, reason for preferring bilateral to unilateral oligopoly: a better distribution of income is attained. At least this is my interpretation of his description of the effects of labor unions in oligopolistic markets, and of agricultural programs:

> At first glance there is something odious about the notion that the poor and the excluded improve their lot in a democracy only by winning power. There is something even more odious about the suggestion that the state can usefully have a part in the process. But so far, at least, there has been less reason to regret than to approve the results of such a policy. The life of farmers and workers, the two great groups that have enjoyed the most obvious subsidy of power, has evidently been improved. It is hard to say that the community at large has suffered. (Page 156.)

This position is of course wholly inconsistent with the previous argument that bilateral oligopoly leads to near competitive results. Here the parties with countervailing power use it to feather their own nests, and proxy-altruism is absent.

To sum up this stage of our analysis, we may say the Galbraith's notion of countervailing power is a dogma, not a theory. It lacks a rational development and must be accepted or rejected without reference to its unstated logical antecedents. Dogmas can be true, and every man knows many things he cannot fully explain; so the characterization

of dogma does not constitute a rejection of Galbraith's position—and may even commend it to some persons. We shall therefore turn to the evidence which is—and is not—adduced to support the dogma.

## III. *The Empirical Evidence*

Two parts of the dogma of countervailing power might possibly be tested. The first part is that one concentration of economic power begets another and offsetting—or at least adjacent—concentration of economic power. This is an objective proposition to which we shall immediately turn. The second part of the dogma is that when bilateral oligopoly exists, socially desirable, or at least tolerable, results are obtained.

Do oligopoly and oligopsony elicit one another? In support for his affirmative answer, Galbraith presents two broad illustrations.

The first is the emergence of labor unions:

> The operation of countervailing power is to be seen with the greatest clarity in the labor market where it is also most fully developed. . . . (Page 121.)
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> . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
>
> As a general though not invariable rule there are strong unions in the United States only where markets are served by strong corporations. . . . (Page 122.)
>
> . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
>
> Nevertheless, as an explanation of the incidence of trade-union strength in the American economy, the theory of countervailing power clearly fits the broad contours of experience. (Page 123.)

The claim has a limited plausibility but it rests on an enumeration of unions whose strength, and often existence, was due to the New Deal. Let us temporarily put aside these governmentally-aided unions and look at unionization in 1929, a year in which government was not particularly favorable to unions and so the natural emergence of countervailing power might be better displayed. In that year, the great American unions were in six industries or crafts: railroading, building trades, coal mining, printing, clothing, and musicians. In only one of the six—railroading—were there relatively few employing firms. Does the exception really prove the rule?

When the federal government intervened in the matter, beginning with the NRA, unions did grow rapidly in a fair number of highly concentrated industries. But what this shows is that governments often nurture some form of guild-cartel organization and that in the thirties the federal government nurtured a great deal of it. Whatever the desirability of this type of organization, we cannot use government-sponsored blocs as an illustration of the natural emergence of countervailing power, unless this is a political rather than an economic dogma. It is true, of course, that once a government intervenes in economic life, it finds industries dominated by a few firms much easier to direct, for both administrative and political reasons.

The second illustration is retail organization:

Thus, in precise parallel with the labor market, we find the retailer with both a protective and profit incentive to develop countervailing power whenever his supplier is in possession of market power. The practical manifestation of this, over the last half-century, has been the spectacular rise of the food chains, the variety chains, the mail-order houses (now graduated into chain stores), the department-store chains, and the co-operative buying organizations of the surviving independent department and food stores.

This development has been the countervailing response to previously established positions of power. (Page 124.)

The area of retail trade, unfortunately, is difficult to study in detail, for we lack (before 1929) good information on the development of chain stores and their commodity sales.

Yet, the evidence is sufficient to permit one to agree with Galbraith that large-scale retailing is "in precise parallel with the labor market"—in that its distribution does not parallel that of concentration in production. By the twenties the chains had become important in groceries and meat, variety goods, drugs, confectionery, shoes, furniture, and men's and women's ready-to-wear apparel. Concentration of production was relatively low in each of these fields except meat packing—and the grocery chains began to handle meat only late in their development—and probably drugs. On the other hand, chains did not prosper in such concentrated products as petroleum products, automobiles, cigarettes (but chains were fairly important in cigars, which is less concentrated), liquor, and household appliances. Department stores had their chief sales in such unconcentrated products as apparel, furniture, dry goods, shoes, etc.

Nor does it appear that the large-scale retailing organizations were able to sell at lower prices than the independent retailers primarily because of lower buying prices. The Federal Trade Commission found that at most one-fifth of the lower price of grocery chains and one-tenth in drugs were due to lower buying prices.[4] The new types of retailers flourished where innovations in merchandising techniques and simplification of selling services were acceptable to consumers, regardless of the extent of concentration in production.

These two tests are not flattering to the dogma. With some diligence one could go on to find examples of adjacent oligopoly in markets for producer and consumer goods: tin plate, iron ore, benzol, lamp black, copper and lead refining, steel rails, and many automobile components. With less diligence one could find many cases where oligopolists or monopolists deal with many relatively small buyers: typewriters, cash registers, many building materials, soft drinks, cigarettes, gasoline, automobiles, batteries, structural steel and many other fabricated steel

[4] *Final Report on the Chain-Store Investigation* (Washington, 1935), pp. 55-56. These maxima are overestimates except where the manufacturers undertook the wholesaling functions, and part of these functions may have been assumed by the chains.

products, glass, shoe machinery, explosives, and probably crystal balls. I place no weight on such *ad hoc* enumerations, but it seems desirable to point out a large area for possible tests and to question whether a first quick glance suggests that adjacent oligopoly is dominant in this area.

Galbraith's second major proposition is that bilateral oligopoly generally leads to socially tolerable results. The testing of this hypothesis is scarcely feasible unless one is equipped with a set of criteria capable of distinguishing good from bad performance and with the empirical information which application of the criteria requires. Galbraith does not state the criteria, or even offer any list of industries organized as bilateral oligopolies which are generally believed to be satisfactory in their performance. Instead, the point is tacitly demonstrated by the view we have already discussed—that the performance of the American economy as a whole is excellent—supplemented by passing praise for the Great Atlantic and Pacific Tea Company, with special reference to corn flakes.

The literature of workable competition is sufficient warning of the difficulty in arriving at judgments on good and bad economic performance, and I have no desire to attempt a discussion of this problem here. But one should at least observe that if one accepts the traditional consensus of economists on particular industries' performances, it requires some skill in selection to find widely applauded instances of bilateral oligopoly. One is more likely to come across steel rails, with a famous record for price rigidity, or movie film production-exhibition, an area of perennial collusion, or iron ore, which in far off Minnesota took years after the Schechter case to learn of the demise of NRA, or the glass container machinery, or the oil pipe-line and refinery structure, or tobacco allotments or milk shed cartels, where bilateral oligopoly has not seemed the best of all possible worlds. The list could be lengthened appreciably, but perhaps it already overcomes any presumption resting on corn flakes.

## IV. *Conclusion*

We have seen that there exists no general tendency for new oligopolies and blocs of owners of productive resources to appear in juxtaposition to established oligopolies. Indeed there is no special reason for them to do so. It is true that as countervailers they might share monopoly profits, but if the new oligopolies are formed in competitive areas, one may also obtain oligopoly profits and in addition avoid struggles with powerful economic units. Nor is there any explanation, in Galbraith's book or elsewhere, why bilateral oligopoly should in general eliminate, and not merely redistribute, monopoly gains.

It would therefore be premature and even irresponsible to talk in detail of possible policy applications of so tentative and unplausible a hypothesis. One could quarrel with some of Galbraith's silences even if one accepted his theory—for example, one wishes to know why if entrepreneurial oligopoly is better than entrepreneurial monopoly, labor union monopoly should be left untouched—but the quarrel would be seriously misleading in implying that the theory had reached the stage of relevance to policy.

With respect to the role of bilateral monopoly as a method of redistribution of income, however, it is possible to comment on policy implications. There is no basic conflict between the conventional theory and Galbraith's theory of the effects of monopolistic groups on the distribution of income. Combinations of workers or farmers may improve their status relative to what they can achieve by individual action. Galbraith views this result as desirable and urges co-operative action by those groups (such as farm laborers and college professors) who are still unorganized. This seems to me unfortunate advice.

The mere fact of combination will not place groups on a basis of equality with respect to one another. The economic power of a group depends upon its ability to control its numbers and upon the elasticity of demand for its services. In a cold January, coal miners will always be able to do better than college professors. The political power of a group depends upon its size and geographic concentration, upon the traditional attitudes toward it, and upon the groups with which it must deal. Farm laborers have more limited possible political power than public school teachers, who in turn have less power than the silver miners. In a regime of universal power blocs, we should encounter new inequities in income distribution which would afront our sensibilities quite as much as any we can find now.

Moreover, our concern—or at least mine—is with individual incomes, and group incomes are only an ambiguous short cut in dealing with them. It seems inefficient to give one farmer $10,000 so that we can give another $300. It is an open question whether all the guild-cartel measures in the last twenty years have decreased the inequality of distribution of income.

I want to close with an apology for the consistently negative attitude I have felt compelled to take with respect to Galbraith's theory. One would like to speak well of so urbane and witty a presentation. Especially at this season one would like to avoid expressing doubts that a mysterious, benevolent being will crawl down each and every chimney and leave a large income as well as directions to the nearest cut-rate outlet. Yet even at this season, Galbraith cannot persuade us that we should turn our economic problems over to Santa.

# COMPETITION AND COUNTERVAILING POWER: THEIR ROLES IN THE AMERICAN ECONOMY[1]

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Over a half-century of discussion in this Association of the effects of big business on the character of the competitive processes in the American economy leaves us as far from a consensus as when the debate began. There has been, of course, considerable clarification of the problem as attention shifted from one facet of the problem to another. It has become clear that the competitive process is no simple thing and that market structures and behavior defy reduction in either law or economics to a simple dichotomy of monopoly and competition. Our theory has been elaborated, but many of the models have proven brittle when applied to brute reality. There has been a steady accretion of data. But much of it has been collected incidental to other purposes and covers too short a time span or is otherwise of limited use.

We have hardly made a beginning at marshaling systematic data on the structure and behavior of industry over a period of time so as to test existing hypotheses or formulate new ones in this area of economics. There are of course a growing number of industry studies of high quality, including studies of such industries as petroleum, cigarettes, aluminum, electric lamp, and radio, where the exigencies of antitrust prosecutions have made a large body of data available. But our view of the competitive process is, I fear, somewhat askew because of our reliance upon antitrust prosecutions for a ticket of admission to the operations of business. There are a few more general studies which make a beginning at mapping the industrial scene. The studies of mergers by John Lintner and Keith Butters and the more recent study by J. Fred Weston together with Leonard Crum's various studies of the corporate system and M. A. Adelman's review of the evidence on concentration are significant. So also are the pioneering attempts by George Stigler and Warren Nutter to measure the extent of monopoly in the American economy.[2] But these studies are of less significance

[1] The author wishes to express his gratitude to the John Simon Guggenheim Memorial Foundation for a fellowship which enabled him to pursue research on the problems under discussion.

[2] John Lintner and J. Keith Butters, "Effect of Mergers on Industrial Concentration, 1940-1947," *Review of Economics and Statistics*, February, 1950, and for comments see *Review of Economics and Statistics*, February, 1951; J. Fred Weston, *The Role of Mergers in the Growth of Large Firms* (University of California Press, 1953); William L. Crum, *The Age Structure of the Corporate System* (University of California

for the very tentative answers which they give to the questions asked than for the light they shed upon the long road we must tread if we are to have reliable answers to meaningful questions.

In the absence of a comprehensive description of market structures and behavior it is not surprising that there have been widely divergent opinions within the profession concerning the competitive process—opinions often strongly held and as strongly opposed. But more than this there have been wide swings in the predominance of public and even professional opinion. Casual phrases such as the "decline of competition" and statistics on increasing concentration and inflexible prices served to polarize thinking and reorient policy in the thirties. Today we see signs of a new polarization around the cult of bigness and the shrine of countervailing power. Not that economists are in general fickle. To the contrary, many remain firmly wedded to their opinions. Moreover, I sense an increasing uneasiness about the state of our knowledge on these problems, which were at the very center of our neoclassical heritage. But in the realm of economic opinion it appears that innovators (to whom the nonpecuniary rewards are often great) bring hordes of destructive imitators in their wake.

One commentator has said of the theories of monopolistic competition that the most striking thing about them was the rapidity with which they captured the textbooks. Whether the theory of countervailing power is to have a similar victory remains to be seen. Already it has captured a position of influence in the business press and on the supplementary reading lists of many courses in economics and political science. Moreover, it provides the theme of many sessions in this year's program of the Association. But is it likely to be more fruitful than the more precise theories of imperfect and monopolistic competition? Is it a concept likely to stimulate more useful analysis of our political economy? Or is it a facile formulation destined to join others in the long list of provocative but fugitive innovations?

In his *American Capitalism: The Concept of Countervailing Power,* Professor Galbraith suggests that thoughtful persons are victims of an image of the economic process which leaves them helpless to account for the success of the American economy. The sweep of the volume and the idiom in which it is expressed insured that the professional critics would have a field day, to their own delight and his amusement, while he seeks refuge in the land of simplification—a land foreign to the more

Press, 1953), and *Corporate Size and Earning Power* (Harvard University Press, 1939); M. A. Adelman, "The Measurement of Industrial Concentration," *Review of Economics and Statistics,* November, 1951, and for comments see *Review of Economics and Statistics,* May, 1952; George J. Stigler, *Five Lectures on Economic Problems* (Macmillan, 1950), Lecture 5; G. Warren Nutter, *The Extent of Enterprise Monopoly in the United States, 1899-1939* (University of Chicago Press, 1951).

cautious but which he assures us abounds in conclusions "based on the full content of truth" (*ibid.*, page ix).

I shall pick out for comment three questions raised by Professor Galbraith's volume which recur frequently in the continuing discussions of monopoly and competition, to which this volume has added fuel: (1) What is the nature of the competitive image of the classical and neoclassical heritage? (2) Is the concept of countervailing power a useful tool of analysis and a useful instrument of policy? (3) Is it true that the competition is so weak an element in the contemporary scene that it should be rejected as a tool of analysis and abandoned as an instrument of policy?

### *The Classical Vision of Competition*

Despite the long usage of the term competition and the central place which it has in contemporary economic analysis and policy, it is a concept more often used than defined. Moreover, it is a concept which has undergone a substantial, if imperceptible, transformation since the days of Adam Smith. The fundamental concept in the *Wealth of Nations* was "self-interest operating in a system of perfect liberty." Contrived scarcity and monopolistic restraints were viewed as undesirable abridgments of this system. This "system of perfect liberty" was viewed as a feasible objective of policy, which if attained would be conducive to the growth of opulence as well as to the best allocation of resources. In the words of Hla Myint (*Theories of Welfare Economics,* page 54) a system of perfect liberty "was thought to encourage thrift, enterprise and initiative which promote a greater division of labor, expansion of market, accumulation of capital, etc." Included in the Smithian system was a theory of value which had within it a theory of resource allocation in which competition played an important part. Freedom to follow one's "interest" in an environment devoid of contrived scarcities and restraints, i.e., the system of perfect liberty, was embraced as a social context conducive to progress in opulence—a concept which included the concept of resource allocation and much more besides. The weakness of the classical position lay in its inattention to the positive prerequisites of the system of perfect liberty. Smith and his successors were detailed in their description of what they were against. It remained for others to detail the institutional requirements to preserve perfect liberty.

With the development of marginalism after 1870, concern with the theory of value and resource allocation took the center of the stage. Marginalism proved a very powerful key to many paradoxes of economics. Moreover, allied with hedonism, psychological and ethical, it was pregnant with implications for public policy. But more important

to the present discussion, it directed closer attention to the nature of the market and to the prerequisites for the equation of normal price and cost of production, which had been envisaged in the classical system. The somewhat ambiguous concept of "perfect liberty" gave way to the more precise concept of "perfect competition." The central focus of much of economics shifted from the explanation of the rate of increase in opulence to the explanation of the allocation of resources. A concept of social structure gave way to the narrower concept of market structure. The vision of a social environment determining the rate of progress of opulence was replaced by the vision of a market structure concerned with the allocation of given resources. Although economics was not without its psychological and sociological presuppositions, an explicit theory of thrift, enterprise, and initiative was all but lost from much of economic theory. As a result, economists turning to the task of defining the institutional requirements of a system of perfect liberty were biased by this limited vision of the competitive process.

It should be noted that Alfred Marshall avoided the extremes of marginalism. In his *Principles of Economics* he showed a keen awareness of the changing cultural context within which economic activities take place and of the interaction between economic activities and this context. Marshall's world was not one of perfect or pure competition. His theory of the representative firm and his studied avoidance of the logic and graphics of marginalism made it clear that in a conflict between logic and observation, Marshall was on the side of observation. It is one of the ironies in the development of economic thought that in trying to reconcile Marshall's decreasing costs of the firm with the theory of the competitive market Marshall's lineal descendents of the Cambridge school should have chosen the other alternative and embracing logic to the exclusion of Marshall's observation should have shunted economics further off into the narrow view of competition. It is this static view of competition, pure or perfect, which Professor Galbraith finds lacking as a model against which to judge the American economy. Few would deny that these static models have proven very brittle when applied to contemporary Western economies. We face the unfinished task of developing a concept of market behavior which is more adequate.

Renewed interest in economic development suggests a broadening of our concept of competition beyond the neoclassical models useful for an analysis of the problem of allocation. We can understand the competitive process of a free society only if we view it as part of the process of economic decision-making in the broadest sense. The allocation of resources is an important element in this process. But the process in-

volves several other facets, including a system for adding to the known resources and the body of knowledge, a system for communicating knowledge, a system for organizing incentives, and a system for distributing wealth and income. The great contribution of the theory of allocation should not be lost sight of in our concern with economic growth since change in which the output of goods of greater preference is sacrificed for goods of lesser preference is not economic progress. But allocation is only one of several factors in the competitive process.

We have had in recent years several plausible hypotheses concerning the relation between size, market behavior, and economic progress which challenge traditional beliefs. Perhaps we shall make more rapid progress in testing rival hypotheses if we unravel the many strands of which the Smithian system of "natural liberty" was woven.

### *Countervailing Power*

But what of power and countervailing power? What place do they have in the contemporary American economy? The kernel of the Galbraith position, stripped of its refinements and exceptions, is simple:

1. Competition means that a seller's power is checked by those who provide a similar or substitute product. In a system of competition the role of the buyer is passive.

2. But concentration has led to "the widespread disappearance of competition" and "its replacement by the small group of firms if not in overt, at least in conventional or tacit collusion." (Page 118.)

3. New restraints on private power have appeared on the opposite side of the market: the countervailing power of buyers or suppliers.

4. This countervailing power is a self-generating force. Private economic power begets the countervailing power of those who are subject to it.

Here indeed is an optimistic doctrine of the dialectic suggesting that it is the search for power and countervailing power rather than self-interest in the search for gain which promotes economic progress.

There is much good sense in Professor Galbraith's tract. It is true that the problems which have preoccupied many leading economists in the last quarter of a century have but limited relevance to the explanation of the successes of the American economy in the last half-century. Their models of competition have done less than full justice to the complex realities. Moreover, Professor Galbraith points to several interesting characteristics of the American economy which have not as yet found a secure place in our global models. Among these are the development of mass distributors, the growth of industry-wide labor organizations, and the adoption of agricultural price and crop control schemes.

Models of market behavior have in general been constructed on the assumption that consumers buy directly from manufacturers. Little attention has been given to the variety of relations between manufacturers, distributors, and consumers and to an analysis of their effects. Likewise, the more widely used models of competitive behavior based on the assumptions of full employment have been ill-adapted to deal with many aspects of wage and agricultural price policy. Both of these developments are significant aspects of the modern economy and in terms of some of the more usual economic models stand condemned. But each seems to have been incorporated into our economic system without, as yet, any obviously disastrous effects. Whether they are unmixed blessings, whether the success of our economy is because of them or in spite of them, will probably be debated for some time to come.

By underlining the extra-market activities through which individuals and groups seek to buttress their market positions (to seek, extend, and defend their market power), Professor Galbraith suggests but does not develop the thesis that the analysis of the power process is of peculiar interest to the modern economist. It is increasingly clear that an understanding of the economic processes of modern capitalistic societies calls for an understanding of the existing structure of power and the power process. The market structure itself is a product in part of this power process; economic objectives are often sought through control of the power process; and economic behavior may be motivated by power objectives.

Economists should welcome a careful analysis of the existing structure of power and the power process as it relates to economic matters. It is clear, however, that we do not have the tools to do it and it is questionable whether our associates in the other social sciences are as yet well prepared.[3] But Professor Galbraith does not make a beginning on these problems such as might have been anticipated by the title of his book. Moreover, I have an uneasy feeling that Professor Galbraith is straining to force under the single rubric of countervailing power, several of phenomena the essential differences between which are as great, if not greater, than their similarities.

The mass distributor is, of course, an important check upon the power of the manufacturer. But is the origin of mass distribution to be found primarily in the desire of distributors to share the privileged position of the manufacturer? Or is it to be found in more conventional factors such as the increased efficiency of mass distribution? And why have the distributors been able to exercise countervailing power? Is it not

[3] But for fruitful suggestions, see Harold D. Lasswell and Abraham Kaplan, ***Power and Society: A Framework for Political Inquiry*** (Yale University Press, 1950).

because the power positions of manufacturers were vulnerable to the competition of other firms, existing or potential? Is it not in part because mass distributors were in a position to develop new sources of supply, if necessary? Is it likely that mass distributors can develop effective countervailing power to a manufacturer for whose product there is no possibility of developing a close substitute? The mass distributor is effective, I submit, in situations where the basis of market control is weak; i.e., where there is actual or potential competition.

I question, also, whether the doctrine of countervailing power is an adequate explanation of the growth of unions or of their present operations. For example, in bituminous coal, unions were a response to the powerlessness of all parties in the industry. As a result of the growth of the unions since 1933 wage rates have been essentially taken out of competition in this industry. As a result the cost structure and competitive relations in this industry are subject to considerable administrative control through the negotiation of the wage bargain. Although the character of competition has been modified significantly, the competition between mine producers on nonwage matters remains keen. But where shall we look for the countervailing power? The limits to abuse of union power (such as they are) are to be found in the interfuel competition and the needs to maintain cohesion within the union. The building trades and other unions would appear to support a similar interpretation.

In the field of agriculture, I am also uneasy with Professor Galbraith's interpretation of countervailing power. There are, of course, examples where farmers have faced buyers with superior power. There are even more cases where they believed they faced such power. But although reification of the relations between industry and agriculture may be good politics, it is not good analysis. As I view the record of the last few decades the problem in agriculture has been one of the basic helplessness of both the buyer and seller of agricultural products in the face of the forces of unrestrained competition. Farmers sought and gained through the exercise of political power a change in the terms of trade. But I interpret this as a case of the use of political power to modify the forces of competition. And on what horizon are we to look for countervailance? Moreover, are we to minimize the importance of competition working within the framework of our agricultural policy? It may not be a completely free and unfettered competition. But freedom and competition in liberal doses, these I do detect.

The fact that the system of countervailing power is relatively ineffective as an instrument for curbing private power in times of inflation suggests that in some of its manifestations it is essentially a device for reducing the insecurity of particular groups in times of depression, for

shifting the burden of cyclical fluctuation, and for putting some floors under the process of deflation. That this is what Professor Galbraith has in mind is indicated by his paper in these *Proceedings* in which he suggests that differences with his critics arise in part from differences in values. He acclaims countervailing power as a device for reducing social tensions, while they condemn it because of its effects on economic efficiency and the allocation of resources. This is a difference worth exploring. A case can be made that both the development of labor unions and recent agricultural policies have reduced social tensions, although Professor Galbraith has certainly not marshaled the evidence. But can the same be said of the rise of mass distribution? The pressures for the Robinson-Patman Act, for the taxation of chain stores, and for fair trade indicate that the development of the mass distributor has created considerable social tension, whatever its effects upon the market power of manufacturers.

The further one burrows into the concept of countervailing power the clearer it becomes that a catchy phrase is being used to cover a variety of situations. It is doubtful whether so used it is a very useful tool of analysis. I doubt, also, that it is good history. And as an instrument of policy it is at best one in a crowded kit of tools along with the traditional tools of the policy of competition.

### *Competition in the American Scene*

What place does competition play in the contemporary American scene? Is competition still a useful tool of analysis and a useful instrument of policy?

If we mean perfect or pure competition, i.e., the absence of any power over price, competition is not an important element in the contemporary American economy. And if we mean a system in which the principle of self-interest leads spontaneously to economic activities in which the rivalry of buyers and sellers narrowly circumscribes the power of each, competition is also a thing of the past. But if we mean a carefully contrived system which facilitates the process of innovation and adaptation through time, in which individual self-interest is given wide play in a carefully structured field, in which the opportunity for initiative and the level of initiative are high, in which there is a constant striving to add to the body of knowledge and resources, in which the system of communication of economic information is operating well, and in which the market position of firms is consequently insecure, then I believe competition is an important element in the contemporary American economy. Competition in this sense is a complex process of many dimensions. It is not identifiable by any simple characteristics of market structure, such as a large number of sellers of a homogeneous

product. Nor is it characterized by some simple relation between costs and prices, such as prices equal to marginal or average costs; nor by some simple rule of behavior, such as acting on the assumption that the price is given by the market. How important competition in this wider sense is in contemporary America, it is difficult to say. We have still to unravel the many strands of which this process is woven and to devise some measures of its degree.

There are impressive statistics attesting to the divergence of industrial markets from the perfectly or purely competitive models. It is also clear that many firms have a degree of discretion, at least in the short run, with respect to their product, prices, or volume of sales. But we have little quantitative evidence as to the degree of discretion available to them and its long-run significance. The measures of monopoly power devised by A. P. Lerner, K. W. Rothschild, J. S. Bain, and others have not proven very fruitful for empirical research. And the statistics on concentration give at best a cross-section view of one aspect of market structure at a moment of time.[4] In these areas our knowledge is still highly qualitative.

It is, of course, questionable whether we approach closely that precise allocation of resources which characterizes behavior consistent with perfect competition. But neither is the flow of resources completely haphazard. Fragmentary evidence suggests that new investment flows as might be expected into the more profitable channels. It is also questionable whether our imperfect "system of liberty" has struck that optimum balance of institutions and rules which is most conducive to the progress of opulence.

The problem of rational policy is a complex one of balancing several values, including resource allocation, income allocation, security, progress, and social tension, against one another. This is a complex problem of choice between ends which are in part complementary and in part competing. The contribution of the economist to this problem is an important but limited one. It is to determine the nature of the available choices in as detailed and concrete form as possible. The serious task of the economist, in short, is to continue the patient search for verified truth concerning the complex nature of the competitive process. Thereby he can contribute to the perfecting of the system of liberty—a system which it is increasingly clear calls for vigilance and art as well as knowledge.

If we are to achieve this understanding of the competitive process, we

[4] For a discussion of various measures of monopoly, see J. P. Miller, "Measures of Monopoly Power and Concentration: Their Economic Significance," in the forthcoming volume by the National Bureau of Economic Research, *Industrial Concentration and Price Policy*, and Fritz Machlup, *The Political Economy of Monopoly* (Johns Hopkins Press, 1952), Chap. 12.

must develop a verified theory of market structures and behavior relevant to an economy in change. Such a theory would explain not only the processes by which wants and resources are adapted to one another but also the constantly changing structure of markets and behavior by which this mutual adaptation is effected. Intensive studies of individual firms, industries, and trade practices should play an important part in such a development. But their usefulness would be immeasurably increased if they were placed in a broader framework of the competitive process which is firmly rooted in empirical analysis.

An important step forward might be made if there could be developed an over-all picture of the changing contours of business structure and behavior in major sectors and subsectors; i.e., a series of indexes indicative of the competitive processes over substantial periods of time. I believe that such a sector analysis would afford a useful basis of classification since the competitive processes in various sectors and subsectors of the economy seem to follow distinctive patterns. Consequently, an analysis of the similarities and differences between sectors and subsectors and within sectors and subsectors may prove to be suggestive of fruitful hypotheses. Moreover, this might provide a useful bridge between our micro- and macroanalysis. I urge the importance of such research because I believe that competition in its broadest sense is an important element in the American scene and that it remains a useful, if as yet imprecise, tool of analysis.[5]

But more than this I believe that the promotion of conditions favorable to competition in the broad sense suggested above should be an important instrument of policy. Competition has recommended itself as an instrument of policy for many reasons. I would underline two. First, it is consistent with a high degree of decentralized decision-making and therefore a low degree of direct coercion. Second, by unleashing and harnessing the creative powers of men it seems to produce results.

Traditional views of the effects of big business and industrial concentration are currently being questioned in many quarters. Although competition and bigness or even moderate concentration need not be inconsistent, we have well-documented cases where they have been. I believe that the questioning of these traditional views is healthy. But we should do a disservice if we were simply to substitute one untested hypothesis for another. It is to be hoped that the stereotypes of the thirties of small business which can do no harm and large business which can be only evil, will not give way to the reverse stereotypes of small business which is inefficient and unprogressive and big business which can do no wrong. The critics of traditional views have asked some challenging questions and proposed some interesting hypotheses. But

[5] For more detailed suggestions on research, see J. P. Miller, *op. cit.*

we are a long way from verifying these hypotheses by marshaling and analyzing the evidence.

The policy of competition requires conditions in which firms, large and small, are forced to make decisions independently and with the expectation that their market positions are insecure. This requires the maintenance of an environment conducive to initiative, to the birth of new firms, to the growth of small firms, and to the penetration of existing firms into one another's markets.

The design and execution of a public policy to promote such conditions requires knowledge artfully used. I doubt, however, that we can rely for this solely upon the spontaneous development of countervailing power any more than we can rely upon the spontaneous development of a system of competition. But in such a program countervailing power will have a niche. The large buyer may in some cases prove a useful and effective check to the large seller. Schemes for stabilizing wage rates and agricultural incomes within limits may prove useful and feasible. Programs of monetary and fiscal policy designed to insure a reasonable stability of income and employment will also be supporting elements. I have considerable hope for the prospects of an economy artfully guided in the policy of competition and buttressed with policies designed to maintain a reasonable stability of effective demand. I have much more hope for such an economy than for one the fate of which lies in the self-generating forces of countervailing power.

## DISCUSSION

David McCord Wright: "Something has made us different. Why were we never taught what it was?" American G.I.'s are reported to have said when they first encountered South European and Asiatic poverty. With the "extreme innocence of a child and a mathematician" a fair number of economists were quick to reply, "Mathematical pure competition."

This view always seemed to me ferociously oversimplified. And just as Professor J. M. Clark in his famous essay on "Workable Competition" had suggested some doubts, so also in my *Virginia Law Review* articles, "Toward Coherent Anti-Trust" and "Some Pitfalls of Economic Theory," I have tried to formulate a broader and more practical approach. Zones of market power, it seemed to me, were not always bad. In fact there is little difficulty in showing that without some form of them there could hardly be much technical progress.

Anyone familiar, however, with the history of thought would have been able to predict with confidence that somebody would be bound, as soon as modifications of the purely competitive norm were suggested, to carry things over to the other extreme and plump for "good" monopoly. This in effect Dr. Galbraith has done. I have had the honor of reviewing Dr. Galbraith's *Capitalism* twice—beside sharing a Chicago round table with him. Accordingly my technical criticisms are well known. What I want to do here, therefore, is merely to say a few words about the basic philosophy underlying his book.

Unfortunately Professor Galbraith has been unable to finish his paper in time for the discussants to see it. However, I do have a letter from him in which he explains that his "value criteria involve minimization of social tensions rather than maximization of social real income." But just at this point comes the basic question—and the question I want to talk about now. Do Galbraith's criteria really make for a "minimization of social tensions"?

Both my *Democracy and Progress* and Dr. Galbraith's *Capitalism* place a great deal of emphasis upon the diffusion of power. But it would be a great mistake to infer from that that we are essentially agreed. For what I advocated was a diffusion of power sufficient to permit continued adjustment and social turnover. But what Dr. Galbraith seems to be advocating is merely the checks and balances of a stalemate. His few big business units countered by a few big unions, locked in a perpetual balance which neither side dares disturb, form a picture about as far removed from creative, democratic, competitive development as one can well conceive.

Mr. Galbraith is too good an economist to be wholly consistent. Thus he does at times stress change, growth, and opportunity. But I suggest that the overwhelming logic of his book and of most of the policy measures suggested by him seems quite the other way and, like the work of Mr. A. M. Schlesinger, Jr., and others, reflects, however unconsciously, a tremendous bias toward a crude and uncritical Platonism. Plato, it will be recalled, held that a "fever of the city" was induced by growing wealth which led to conflicts and disorder. (On all these points, see Michael Foster *The Political Philosophy of Plato and Hegel*, Oxford, 1935, especially Chapters I, II, and VII.) Luxury multi-

plied a man's wants and so on. It was the business of a group of philosopher-rulers to take over and reimpose upon the city its healthy form—its primitive balance—a harmonious unchanging division of labor. Furthermore, the consent of most of the citizens was not held necessary. They were mere material upon whom the proper form was to be imposed. Only the rulers possessed the ultimate insight into the perfect form; therefore they were the only people whose opinions were worth considering.

Of course the account of Plato just given is oversimplified and differs in many important respects from modern variant emanations of Platonic thought. But I suggest that Plato's picture underlies a great deal of left-wing thought. I suggest further that it has had a great influence upon much nominally right-wing thought—especially the type exemplified by Professor Galbraith. Thomas Jefferson hated Plato and with reason. For Jefferson was through and through a philosopher of spontaneous creative change. Further, Jefferson believed that nearly all men had some share of creative insight, together with some ability to recognize and freely and voluntarily to conform to ideal standards—"Sophia" in other words. Thus to Jefferson the restriction of power to some small minority of supermen was anathema.

What has all this got to do with economics and with Galbraith's countervailing power? A great deal. For I suggest that many of the phenomena which modern Platonists tend to call the fever of the city are really merely parts of the process of creative growth. And what all of them want to do consciously or unconsciously is to stop the growth process. Whether a "radical" or a "conservative" label is used to do it does not seem to me to make much difference.

The trouble is that Plato's conception of health is a static one. He takes the parts of the body of a full-grown man and discusses their harmonious relationship. This image is then applied to the parts of the social system. But the analogy which seems to me most fruitful and the one used in my *Economics of Disturbance* is with the parts of the body of a growing youth.

> An economic process is not a lifeless aggregation of mechanical pulls. It is a process, a change, a becoming. It may be best compared to a living human body. As with the body it is essential that the relative size of the various sections of the whole change with the stages of growth. . . . In this problem of harmonious and symmetrical development—so familiar alike to the athlete and the philosopher—we find the kernel of any theory of disturbance.

Traditional American democratic thought has been shot through with the notion of continual change. As with Alfred North Whitehead, our notion has been that "there can be no such thing as the halt of civilization in the indefinite repetition of a perfected ideal." Without novelty, staleness sets in. In other words, a man grows up and reaches a healthy and more or less "final" set of proportions as between organs but a creative society never attains any such finality.

Today, however, the right-wing and left-wing Platonists, the philosophers of the eternal stalemate, have a different argument. Having been forced to admit that some insecurity and adventure is essential to growth and not only to growth but to artistic and scientific development, they now fall back to a new position: Why growth, anyhow? We care only for the higher things. As

Professor Galbraith remarked in his round table discussions with Dr. Friedman and myself, "Why do you want to keep stirring people up and making them unhappy?" This brings me to the core of my argument. Does the philosophy of stalemate really make people any happier than the philosophy of creative competition?

Many people tend to confuse absence of change with absence of greed. But a peasant is not disinterested. His frequent avarice, cupidity, and envy have been vividly portrayed in scores of novels. As Schumpeter points out, peasant motivation is completely economic—but it does not lead to growth.

On the other hand the desire for accumulation or industrial leadership does not necessarily lead to a desire to cut the other man's throat. To mix metaphors a bit, you are not necessarily trying to spoil the other man's game. You may only be wanting to build up your own. Envy in the sense of negative covetousness is a destructive emotion. Emulation may be generous in the highest degree. Much modern thought reads as if the social total were inevitably given. Therefore, if I get more, you must get less. But this is quite wrong. My "more" may be a net addition to the total output. Not only need it not be at your expense, but you may benefit, too. As Peter Drucker says, the distinguishing quality of our industrial system is its ability to expand "at nobody's expense." Marxism almost wholly misses the creative power of the new idea.

We hear a great deal today about the duty of the strong to love the weak. But may I suggest that under democracy it is equally important that the weak should love, or at least be generous in their interpretation of, the strong. For the strong are in the minority. Thus in democracy the weak are the strong. "Rumour can ope the grave."

When a man gets rich and builds a fine house, is he bound to have built it to show off? Not necessarily. He may enjoy building houses. Does he give a party just to show off? Not necessarily. He may give it to share pleasure with his friends. If he does an outstanding piece of work or takes an outstanding part in a discussion, is he just trying to show up the other people? Not at all. He may be interested in his duty or his work. But slander, envy, backbiting, lack of charity, corrosive bitterness—these are the characteristic sins of the lazy and the feeble.

The desire to use one's talents to the best of one's ability is neither ungenerous nor unchristian. "So run that you may win the prize," said St. Paul. Are incentives unchristian? See the parable of the talents in Matthew 25. Or again, St. Paul, I Corinthians 9: "Who plants a vineyard without eating any of the fruit? Who tends the flock without getting some of the milk—the plowman should plow in hope and the thresher thresh in hope of a share in the crop." Or I Thessalonians 5: "When people say 'there is peace and security' then sudden destruction will fall upon them."

Again, a man may not be frustrated because he is emulating someone. He may be emulating someone because he is frustrated. This is not to take the simple-minded view advanced among some psychological sociologists that a man only wants to do outstanding work as a compensation for some other dis-

appointment. But what I do mean to say is that many a man does find constructive outlets for otherwise corroding neuroses by "throwing himself into his work." And certainly there will be plenty of sources of neurosis in even the most ideal (or the most secure) social system. Does universal social security, for example, necessarily mean that, if a man loves, his love will be bound to be returned? Inequality, also, of power and of conspicuous position is completely ineradicable in organized social life. Cannot therefore a man render himself unhappy in any society—by aiming too high? But does this mean that he should not strive at all? Thus, conceding the universal possibility of neurosis, may not the opportunity of trying to make a fortune (under proper social safeguards) often furnish a relatively innocent outlet for psychic forces that could be far more dangerous in alternative manifestations?

Let me give a more simple and directly "economic" example. If a man wants more goods, he may work more to get them. But suppose he still wants more goods and he finds himself in a society in which his extra effort will be allowed virtually no rewards. Then he is left to stew in the juices of his own hopeless envy. And rancid individual envy without hope may find eventual outlet in violent social disorder. It seems to me we have here the clue to much of the growing industrial bitterness of "third force," laborite Europe.

Some philosophers will say: "Teach people not to want more." I confess I personally prefer a philosophy which says, rather: "Give people opportunities for constructive action which will increase their mutual means of satisfaction —thus at once helping to bring wants and means of supplying wants into some sort of balance and also (which the other philosophy cannot do) allowing opportunity for the expression of the creative urge." But suppose we leave creativity out of it and say merely that we will teach people to limit wants. It seems to me, nevertheless, that we will in this point come to the very essence of the confusion (if it is a confusion and not deliberate wrecking) which bids fair to destroy our culture. Does the modern "noneconomic," "third-force" outlook really teach a man to limit his wants? Does it not rather teach instead the resounding lie that we can all get more at once without any of us, individually, working a bit harder or submitting to the readjustment of work routines which is absolutely and demonstrably unavoidable if output is to be increased under any system? Do we hear our trade unionists and our socialists who talk of the "noneconomic good" also coming before their rank and file with sermons advocating ascetic poverty and the renunciation of worldly consumption? Of course not. We find them instead saying something which, if they are intelligent and informed, they must know to be nonsense; namely, either that the wants of the poor can be met out of the "rich" or else that we can have increased production without continually rearranging (and hence disturbing) job routines. Such talk is mere dangerous hypocrisy. A young European laborite explained eloquently to me that his people and his union were above the "American scramble for goods." "Why then are you calling a strike next week?" said I.

Getting back now to Plato and the parts of the body. If we permit a society to be sufficiently fluid though unequal to give an outlet to the creative instincts

of men and hence growth, we cannot, it is true, guarantee that nobody will be disappointed. And certainly some work groups will be bound to lose ground relatively at the very least. Furthermore, some people will break themselves in the competitive struggle by trying to do too much. The honest economist can only say that the fluid society is best on balance. Self-love and social are not always the same.

On the other hand, our age has forgotten that they are not always different. "Use your talents to the best of your ability but don't let ambition run away with you. Try to make an objective guess as to what you are worth and cut your coat to your cloth. But don't try to pull down the other fellow just because he can do more. Keep your end up and be a good sport." These are the inspirations I find in the American tradition (and also, it seems to me, in the New Testament). They may be naïve. They certainly will not give complete Utopia. They will not make everyone rich at once. But dare I not suggest that they will give a relatively greater degree of happiness than the grim jealousy and "pull down the other fellow to my level" that now passes as "altruism." Shall a man spend his time envying the man at the top of the tree—or spend his time trying to grow a new tree of his own?

The relationship of all this to economic policy and to ideas like Dr. Galbraith's has been outlined so often in my books that I need only give a few notes. We do not want compulsory equality and we do not want compulsory inequality. We want a society with social services but also sufficient fluidity and incentives to give a man a fair chance. We do not want compulsory small business and we do not want eternally secure big business. We want a society in which little businesses can become big and big ones little. One way to kill capitalism and democracy alike is by adopting the Platonic idea of the fixed pattern. You can do it by direct attack. But an equally effective though safer and pleasanter method is to do it by persuading businessmen to cut their own throats. Essentially that is what the gospel of "good monopoly" means. Albeit quite possibly unconsciously, I should judge Dr. Galbraith one of the most effective enemies of both capitalism and democracy.

FRANK J. KOTTKE: I am among those who respond with caution to Professor Galbraith's cheerful optimism. My difficulty is that countervailing power, taken at Professor Galbraith's own estimate, is a poor substitute for competition. Countervailing power, we are told, is of no avail in a period of rapidly rising prices or, for that matter, in any sellers' market. Countervailing power of course does not neutralize the original power where interests of the two coincide. Thus labor may join the management of an industry in pressing for tariff protection, or suppliers and their largest customers may seek an end to government rationing. Sometimes the firms with original power pre-empt the economic base from which countervailing power might arise, as when oligopolists control the channels through which their goods reach final consumers. In short, countervailing power works some of the time, to protect limited groups of people, against certain contingencies. Most of these limitations are recognized explicitly by Professor Galbraith.

I wish to inject five observations very briefly.

First, competition is still an alternative. Professor Galbraith's position is founded on his conclusion that, certain important markets excepted, competition is gone for good as the effective force for efficient performance in the American economy. This conclusion rests on two theses. I do not agree with the first, which is that for competition to be effective market conditions must closely approach the theoretical model. The competition that enjoyed the spirited defense of five generations of economists was not pure competition but the competition they observed among their contemporaries. Nor do I assent to the sweeping generalization that the causes of oligopoly are "deeply organic."[1] The advantages of an early start, of a going organization, and of large-scale operations generally are not enough to account for a paucity of suppliers to a nation-wide market. My skepticism concerning the inevitability of oligopoly is reinforced by the appearance of important new suppliers in a number of highly concentrated industries; for example, "permanent antifreeze" for automobile radiators, margarine, photographic equipment, domestic laundry equipment, phonograph records, and sewing machines.

Secondly, I agree with Professor Stigler that countervailing power has failed to appear in too many instances to warrant the generalization that it is "self-generating." Among the examples of such lapses cited by Professor Stigler are the distribution of building materials, and the production of gasoline, automobiles, and typewriters. He also cites the failure of workers to organize prior to the NRA in many highly concentrated industries.

Third, I am not comforted by Professor Galbraith's assurance that countervailing power is exerted against only those sellers who insist on abnormally high prices and against only those buyers who demand abnormally low prices; that is, that countervailing power is effective against strong bargainers but not against the weak. To be sure, the weak bargainers cannot be forced to share monopoly profits they do not have, but they can be induced to sell for less than their full costs if they have perishable goods to dispose of, or a slender balance at the bank, or important fixed costs. Concluding an account of A & P's negotiations with manufacturers of corn flakes, Professor Galbraith says in his book: "Such gains from the exercise of countervailing power, it will be clear, could only occur where there is an exercise of original market power with which to contend." (Page 125.) Not only is this an implausible generalization but it is contrary to the experience of the particular company under discussion. In their recent study of the A & P case, Dirlam and Kahn report that "the record of the case discloses few significant examples of A & P's buying policy exerting any influence on prices of groceries supplied under seriously monopolistic conditions. . . . Of the thirty-six companies which the government alleged in its brief on appeal had yielded to A & P pressure, twenty-one were not in *Moody's:* the majority were relatively small and subject to intense competition."[2]

Fourth, countervailing power is much more likely to impede than to stimu-

[1] J. K. Galbraith, *American Capitalism: The Concept of Countervailing Power* (Houghton Mifflin Co., 1952), p. 36.

[2] Joel B. Dirlam and Alfred E. Kahn, "Antitrust Law and the Big Buyer: Another Look at the A & P Case," *Journal of Political Economy*, April, 1952, pp. 128-129.

late technological progress. Whether oligopolists alone can perform the innovative function is highly debatable, but in a wide sector of the economy we have come to rely upon them for innovations requiring large resources. Oligopolists' rivalry provides an inducement and generous margins provide the means. What is the contribution of countervailing power? Professor Galbraith does not once mention countervailing power in his discussion of this subject.

My final point is that a theory of bilateral oligopoly cannot be formulated in the precise and elaborate manner of the theory of competition.

It is possible to generalize about competitive markets because participating firms have little real choice on significant issues. While a temporary deviation from the right policy rarely is disastrous, firms in competitive markets have so little discretion to follow an independent price policy or to ignore improvements in technique that it is possible to simplify discussions by the assumption that they have no discretion whatever. Of course, a firm may elect to abandon one line of activity for another, but if the first line is profitable the firm's former role soon will be filled by other firms.

But in many areas of economic activity firms are not constrained to act in a single way. They may have freedom of maneuver in three dimensions. First, the prices quoted by rivals do not deny all discretion to a firm with a sloping demand curve. Second, the firm's own costs leave a wide margin of choice if the firm makes many products and the cost of the particular product is imperfectly known or constitutes a small part of the company's total outlay. Third, a firm may eschew maximum short-run profits on the product in question because it also is marketing complementary goods, or because maximum profits are not the overriding aim of management, or because of a lively interest in long-run advantages.

M. A. Adelman:[1] There seems to be universal agreement that where one or more firms have achieved a position of monopoly, in the very widest sense, this position constitutes an incentive for other firms to claim part of the actual or potential gains. This claimant action may consist in offering direct competition in the same product; or in offering a good substitute; or in a more powerful buyer (or seller) gaining the profits through a lower buying (or higher selling) price. "Countervailing power" is concerned with this last possibility.

There also seems to be agreement that the result of a large buyer driving down the buying price may be to reduce prices in later markets. A lower price, however obtained, becomes a lower cost, and depending on various elasticities, it may to a lesser or greater extent be passed on to customers. The disagreement is not over the possibility, but over its generality and its importance.

The nearest approach to a theory of such markets was made a decade ago by William H. Nicholls and A. C. Hoffman. They leaned to the view that in markets of bilateral monopoly or oligopoly, the gains would probably be shared

[1] In order to have only a single footnote, the following reference numbers will be used in the text: (1) Federal Trade Commission, *Chain Stores; Final Report* (Washington, 1934), p. 90; (2) M. A. Adelman, "Dirlam and Kahn on the A&P Case," *Journal of Political Economy*, 1953, p. 441, par. 3; (3) *id.*, "The Consistency of the Robinson-Patman Act," *Stanford Law Review*, December, 1953, pp. 3-21.

between the buyers and sellers; nor did they expect that the buyer should in general find it in his interest to pass along his gains. Stigler points to a number of corroborative examples, which seem to me to be appropriate.

Some detailed research will probably appear next year: I refer to the work of James W. McKie on tin cans and my own on food distribution. Neither of us would question the Nicholls-Hoffman thesis. Stigler's belief that the lower selling prices of chain stores were due overwhelmingly to lower operating costs is surely correct; it is simply a myth that the growth of chains "was based largely on special price concessions from manufacturers" (1). For the period since 1936, the chains have probably paid higher net prices than non-chains.

Mr. Galbraith adheres to the traditional and correct view that sellers' price discrimination can only exist because of monopoly elements on the selling side. In opposition, Mr. Kottke's point of financial stringency is redundant and also irrelevant. For we need to explain not a low price but a differential in prices. A seller accepts a lower price from some buyers because if he tried to sell all his output in the higher priced markets, he would drive the price so far down that he would be worse off selling at a single price than at discriminatory prices. If the seller can so substantially affect the market price, he obviously has considerable market control.

If Mr. Kottke's evidence be accepted for purposes of the argument (and for no other purpose), it refutes his own thesis. If about 40 per cent of A & P suppliers allegedly favoring A & P were in Moody's while only 20 per cent of all A & P suppliers were so listed, this obviously means that a large supplier is twice as likely to be found favoring the large buyer (2).

A discriminating seller lacking market control is a species of purple cow, and none of us can ever hope to see one. Of course I speak of discrimination as price differentials net of cost differentials, not of "discrimination" in the doublethink of Robinson-Patman land, where prices must be uniform despite cost differentials (3).

But although there can be no discrimination without market control, there may be monopoly without discrimination. And the most highly differentiated (monopolized) products were on the whole least affected by discrimination. There is no simple correlation.

One point of general interest: the chains' "power" in the sense of market control or monopsony was usually slight; their power in the sense of size—able to enjoy economies of buying, selling, and integration—was considerable and important. It is unfortunate that the single word power is used in these two very different senses: the power to enjoy freedom from competition, and the power to inject competition. Thus we may consider another striking example of countervailing power: in the bituminous coal industry. Mr. Lewis has been able to do for the coal industry what it could not under the antitrust laws do for itself. By controlling the input of labor, he has restricted the supply of coal in such a way as to maximize or at least meliorize the profits of the industry; whereupon he has been able in his other role of bargaining agent for coal labor to claim a large share of these gains.

The discussion of countervailing power is a useful reminder that a given market must be appraised as a whole, with full allowance for the influences

that may impinge upon it from adjacent markets. This is an example of J. M. Clark's rule that every market is a blend of competitive and monopolistic influences. And the general principle also works as a corrective to the special one: that the apparently beneficent effects of a large buyer, when they do exist, cannot be appraised alone; one must also consider such effects as entry. Hence even in the special cases where lower buying prices are passed on to customers, it does not necessarily follow that competition has been enhanced or that income will be larger or better distributed.

Turning now to the social and political aspects, it may be somewhat misleading to think of political power building up as a counter to power elsewhere. All power is relative; all political power is countervailing power in that it exists to push against any obstacle between desire and fulfillment. There seems no need to postulate any original power to countervail against. Mr. Galbraith may have some other, purely political, theory in mind, but its outlines are not visible to me.

# AN APPRAISAL OF ECONOMIC CHANGE

## TWENTIETH-CENTURY ENTREPRENEURSHIP IN THE UNITED STATES AND ECONOMIC GROWTH

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At a session of the Econometric Society a year or two ago, a speaker took ten minutes at the start of his paper to prove that he was concerned with quantities greater than minus infinity. Perhaps I should correspondingly begin by suggesting, if not in fact proving, that, in talking about the relation of entrepreneurship to economic growth, I am thinking, at least for present purposes, of an economic factor that is somewhat less than plus infinity!

I choose to draw attention to American entrepreneurship in the twentieth century as at least one element in explaining our extraordinary economic advance over the past half-century for several reasons:

1. It seems to me that too often writers trying to deal with our civilization, whether they be economists, historians, or literary men, tend to portray the businessman as a stereotype. The traditional figure of a hard-bitten, selfish, asocial, if not antisocial, owner-entrepreneur, pursuing almost exclusively maximum profits, still affects our thinking. I would contend, to the contrary, that the major characteristic of business or entrepreneurial leaders over recent decades has been that of change—and change away from this figure inherited from earlier centuries. The typical businessman of 1900, let alone 1850, would feel as strange in the present business world as the typical scientist or doctor of those earlier dates, if he also could be brought back to life and placed among his professional descendants.

To some degree this set of changes has been raising hob with traditional economic theory. As Professor Joel Dean has said in his *Managerial Economics* (page 28):

> In recent years "profit maximization" has been extensively qualified by theorists to refer to the long run; to refer to management's rather than to owners' income; to include nonfinancial income such as increased leisure for highstrung executives and more congenial relations between executive levels within the firm; and to make allowance for special considerations such as restraining competition, maintaining management control, holding off wage demands, and forestalling antitrust suits. The concept has become so general and hazy that it seems to encompass most of man's aims in life.

Now I would urge merely that, instead of patching old theories,

perhaps economics would gain from a fresh effort to develop new basic concepts more fully in tune with contemporary business procedures and performance.

2. Professor Burnham has written of a "managerial revolution," Professor Boulding of an "organizational revolution," and the chairman of the Birmingham (England) Chamber of Commerce has posited an American "productivity revolution" in recent decades. I venture to believe that we need to know more precisely what has really occurred in the field of business—broadly viewed.

3. More particularly I would raise the questions—which surely I cannot pretend yet to answer: (*a*) whether there are not, in the recently evolved structure of American entrepreneurship, elements of self-justifying practices and points of view, which have important economic or social consequences—not another "invisible hand," but at least a fruitful disposition of forces—and (*b*) whether the course of development within American business life, in part forced by alterations in social structure and by concurrent sophistication of governmental controls, does not hold promise of a somewhat enduring compromise position between the supposed necessary alternatives of unfettered free enterprise and a planned economy. Probably neither of these alternatives satisfies the basic sanctions of our civilization. Perhaps a socially responsive, technically efficient entrepreneurial system is the best economic constitution that we can evolve in an always imperfect world. There are, to be sure, questions whether such a compromise position is viable or tenable, as I hope to make obvious before I close.

Parenthetically, and also in the way of introduction, I should enter a caveat. In such a brief survey as I can here attempt, it is obviously impossible to give attention to the divergencies of entrepreneurial character and performance that exist among different lines of industry, different sizes of companies, or different regions of the country either now or at any point in the past of which I may speak. What I have to say will, at most, be applicable only to the leading enterprises in the industrially more advanced sections of the country at any specific period. I do believe that enterprises of lesser size have shared (and do share) in appreciable measure in the phenomena displayed by those companies from which I draw my data; and it seems the lesson of history that the remaining units in the country have followed (or will follow) with greater or less lag the practices and attitudes displayed by the leaders in the business world. Indeed, there are factors internal to business, implementing or supplementing the blind force of competition, which help to spread the lessons learned in the higher echelons of business organization.

The years around the turn of the century were a fecund period in

American business life. Any number of events might be recorded that cast shadows before them. The first nation-wide advertising campaign deliberately planned was launched in 1899; the first controller of an industrial enterprise was appointed in 1892; the scheme of industrial reform associated with the name of Frederick W. Taylor was given the name of "scientific management" in 1905 and Taylor himself then for the first time drew the general spotlight; Upton Sinclair's book, *The Jungle,* hit the stands in 1901, Ida Tarbell's revelations of Rockefeller misdeeds in 1905, and a president of the United States dared to show sympathy for anthracite coal miners in a strike in 1902; J. Pierpont Morgan reached the pinnacle of his power with the flotation of the United States Steel Corporation in the previous year, while Judge Gary, aided and abetted by A. Lowes Dickinson, of Price-Waterhouse, secured unprecedented disclosure of that corporation's activities in its first annual report to stockholders; Ivy Lee was in New York at this time trying to find employment in what he believed business concerns to need, effective public relations; and—to bring the list to a necessary close—the Wharton School at Pennsylvania was well begun and the wholly graduate school of business administration at Harvard was in gestation by 1906.

One can interpret the events of this period—and their consequences or evolution in later years—by various schema. Possibly this was a case of "challenge and response" in the Toynbee concept of historical process—although surely Toynbee had in mind whole civilizations in presenting his hypothesis. There had been a quarter-century of especially unrestrained action by businessmen. Economists, businessmen's lawyer friends, and the latters' legal friends on the Supreme Court all chanted the song of benevolent natural law. Herbert Spencer was given a public dinner in New York in 1874, and his particular brand of natural law became the favored dogma of such intellectual leaders as Nicholas Murray Butler, Charles W. Eliot, and William Graham Sumner. Business power and the splendid crown of accumulated wealth seemed, as Dr. A. Whitney Griswold once wrote, to receive "well-nigh universal praise"; everywhere "honor was being done to the captains of industry and kings of enterprise." This was indeed "the gilded age," as historians have labeled it. Morgan judged men on the basis of their "integrity," but this seemed frequently to be the appraisal of their operations by the single test of financial soundness; the American Bankers Association assessed its members to beat Bryan; gorgeous houses rose on Fifth Avenue and at Newport; we seemed indeed headed toward a plutocracy, with "survival of the fittest" bestowing crowns on all men of wealth.

The scrambling for financial success, however, had evoked too much irresponsibility, too much corruption of politics and the judiciary, too

frequent antisocial actions, too much instability, to pass unchallenged. The regime was challenged by Henry Demarest Lloyd, by the "muck-rakers," by Ida Tarbell, even by President Roosevelt the First when he permitted proceedings against the Northern Securities Company and encouraged Gifford Pinchot in his campaign against the spoliation of national resources. Since the 1895-1905 period, American business has been generally under a cloud, pierced only by the unusual sunlight of the boom in the twenties, or its effective performance in World War II.

American businessmen may not consciously have recognized the challenge, at least to the degree of doing anything specifically to meet it—beyond the ineffectiveness of strengthening the N.A.M. and comparable organizations. The generation of businessmen just then coming into power was likely not to have recognized the cloud. Men like Mr. Baer of the anthracite industry would not quickly cease to believe that "God in his infinite wisdom" had put business properties into the hands of men such as he. However, the succeeding generations, maturing in the changed social milieu, have been more sensitive—and the broad impact of the depression in the thirties served to drive home the lesson. In some measure the efforts of leading businessmen to improve operating performance, to live amicably with government, to establish public relations on a "two-way street," and to win the co-operation of employees may be looked upon as a response—to be sure, primarily an unconscious response—to the challenge leveled at the turn of the century.

Another interpretation—perhaps no more acceptable to some economists—would run in these terms: that a number of potentially fruitful developments, such as advertising agencies, scientific management, or controllership, were already budded in the latter years of the nineteenth century and the formation of large enterprises in the period of the "trust movement" supplied an environment for the real utilization of these potentials. Surely it was the National Biscuit Company that put on the first nation-wide campaign to reach consumers; surely it was the American Tel. and Tel. that early saw the need of institutional advertising; and assuredly it was the larger companies that embraced the services of public relations counselors. Perhaps the concept of "economies of size" should be extended to include the phenomenon of the promotion by entrepreneurial action (and the support) of ancillary service institutions which, when established, purvey utilities that the producing or commercial companies themselves would have found it unprofitable to provide for themselves. This phenomenon is more than the division of labor; it is a form of roundabout production. In general, not machinery nor other physical units are turned out, to be sure, but services. I venture to think that some such concept was in Professor Allyn A. Young's mind when, writing in the *Economic Journal* (Volume

38, page 539) on "Increasing Returns and Economic Progress," he said: "The mechanism of increasing returns is not to be discerned adequately by observing the effects of variation in the size of an individual firm or of a particular industry, for the progressive division and specialization of industries is an essential part of the process by which increasing returns are realized. What is required is that industrial operations be seen as an interrelated whole. . . . The division of labor depends upon the extent of the market, but the extent of the market also depends upon the division of labor. In this circumstance lies the possibility of economic progress," apart from technological change. If Professor Young did not indeed have ancillary business institutions in mind, his concept does seem to fit the case. Advertising agencies, personnel advisers, management consultants, producers of office equipment, and the rest may be regarded as forming "specialized" industries. They do represent the investment of considerable capital, and their "services rendered" may be equated to "goods produced." And in significance proportionate to the numbers of their employees, they do provide a market for the products of their clients.

Whatever the causal base, the fact of a transformed American entrepreneurial system cannot easily be denied. It is apparent in the altered international status of our business order. To be sure, the later years of the nineteenth century brought from Europe worried allegations of an "American threat" to its industries, but these were tied in largely with the dumping of American goods in periods of depression. Now we have "productivity teams" of English or French or Italian businessmen touring this country in search of our keys to success; and we have the equally revealing phenomenon of disappointingly meager results when merely capital and technological information are poured into foreign lands.

Many features of change in American entrepreneurship compete for attention, but the more striking and significant ones can, I believe, be elaborated under one or another of the three categories: the increased sophistication of business; the altered time-perspectives; and the changed objectives of the business unit.

Elsewhere I have already used the adjective "sophisticated" to differentiate the most recent (and current) phase of entrepreneurship in the United States from earlier phases, which I ventured to denominate as "rule-of-thumb" and "rational."[1] In suggesting this trichotomy, I had principally in mind the increasing body of knowledge available to the businessman at successive periods and his typical attitude toward that body of knowledge. One can contrast the mercantile gossip on the basis

[1] Arthur H. Cole, "An Approach to the Study of Entrepreneurship," *Tasks of Economic History* (Supplement to the *Journal of Economic History*, 1946), p. 10.

of which the colonial merchant could and did act, without consideration of consequences other than to himself, with a group of modern executive officers sitting together with reports of their controller, sales manager, legal counsel, and other assistants before them, and debating what do these data really signify or how would the various possible actions severally affect their internal or external relationships.

The typical entrepreneur of even 1900 was an innocent as compared with his present-day descendant. Take the matter of ideas. The businessman of that day had little to think about beyond the price of his raw materials and products, wage rates, margins, the tariff, and items of similar specificity. To be sure, he was groping toward tentative generalizations, as, for example, realizing that bad business followed good —sometime—but unable to visualize forecasting procedures or even to adapt his reporting methods to give himself a clearer guide to action. Also, in such large organizations as the leading railroad companies or steel enterprises, he had worked out pragmatic solutions to problems of enlarged bureaucracies and was beginning to wonder whether he could not improve them.

However, no concept of separable business functions, no notion of line and staff organization, hardly the idea of a manageable national market had entered his consciousness—or anybody else's. But, as all types of scientists have long since discovered, one's thoughts can get off the ground only by aid of concepts of some sort. Economists of the past (and present) have known the lifting effects of marginal utility, business cycles, and propensity to consume—to name but a few cases. Professor Vigo A. Demant in his *Religion and the Decline of Capitalism* (pages 27-28) traces the rise of socialism as much to formulations of why the underprivileged were suffering as to the actual sufferings themselves. So likewise has it been with thought processes in business administration. Lately the businessman has at least a modicum of conceptual apparatus to aid him in his thinking. The student has only to compare the business literature, including functionally oriented magazines, of the fifties with the scraps of feeble business writing of the nineties to realize how far the area of business thinking has progressed. In the earlier literature, one can, for example, find no significant attention to cost accounting—and indeed no book on that subject had appeared in the nineteenth century; there was no concept of proper inventory control; and systematic depreciation was just coming to be broadly recognized as a legitimate charge on earnings, especially in manufacturing industry. Compare, if you will, the elaboration of modern thought on the last topic alone: charges not merely for wear and tear and for obsolescence, but for renewals, supersession, and inadequacy; and the variant methods for computing the proper charges:

straight-line, annuity, sinking fund, compound interest, or sum of the years' digits. Accountancy in general was scarcely beyond its infancy in 1900, despite the fact that double-entry bookkeeping had been described in print as far back as 1494. Yet by 1939 a group of professional American accountants could sit down together and hammer out statements on accounting procedures to guide their colleagues toward uniformity in their operations. Or take the area of advertising. Efforts to attract public attention to individual enterprises or wares go back to trade cards and inn signs of the seventeenth century, but the first book on "advertising as a business force" did not appear until 1913. Or, again, marketing had been a business operation for centuries, but not until 1926 did Professor M. T. Copeland offer a breakdown of convenience, shopping, and specialty retail commodities.

Sophistication received an important boost from Frederick W. Taylor and his disciples, and is continually receiving impetus from schools of business. What Taylor taught was of considerable importance, no doubt, but I suspect that his greatest contribution in the field of business was the idea that something constructive could be done about the field of business! One need not rely simply on the hard knocks of experience; one could "take thought" and could study. Similarly, the instruction that business schools (of collegiate and graduate character) hammer into their students is doubtlessly important, but what they instill incidentally may be more significant yet; namely, that business is not a mere task of figuring margins or running a sharp bargain; it is something that can be studied, and studied continuingly. And as such—incidentally—as an intellectual challenge, this development has perhaps done more to maintain or attract talent to the field of business than any force now operating. Business schools foster thinking in terms of concepts. And Professor Deutsch has pointed out that one of the important phases of innovation is learning to learn.

Out of the increasing sophistication of business have stemmed various developments important to economic as well as mere business considerations. Standards of all sorts have been devised, which have sharpened the performance of business enterprises; i.e., economized the use of resources and labor. And—in the matter of standard costs—costs may not be allowed to behave; they may be "made to behave," as Professor W. W. Cooper has suggested ("A Proposal for Extending the Theory of the Firm," *Quarterly Journal of Economics,* 1951, page 92). Again, management has tended more and more to become professionalized, with the consequences first, as noted by Professor Dean and others, that financial considerations—efforts to maximize profits—have come to play a subdued role compared with the era of the owner-entrepreneur; and, second, as Oswald Knauth has pointed out, we

have labor bargaining not with "capital" but, as it were, with fellow employees! And, third, sophistication has brought the training of future executives by present executives—presumably future executives who will be conscious of business and social change—and so the instituting of a sort of perpetual motion! Better future executives to contribute better performance to a better economic world!

The same sort of attitude is evident in the many directions around which the modern entrepreneur has learned to swing his gaze more or less constantly. That envisaged in monopolistic competition is but one of several: not merely his competitors or the whole market structure, but stockholders, his board of directors, government, underofficers, and employees—even his associates' wives, if we may believe *Fortune!* He is sometimes moved to conceive himself as a "balance wheel" among disputant and to some degree competitive interests, and talks from time to time of his "social responsibilities"—while at the same time presumably performing as a leader of these interests toward some goal which perhaps only he can see!

The advance in the treatment accorded employees over the past fifty years—apart from concessions extracted from management by government or organized labor—is illustrative of enhanced sophisticated awareness to a growing problem. Probably it would not be far from the truth to say that, as of 1900, scarcely any business executive felt more than a charitable responsibility for his employees. Thanks to immigration and to the natural increase of resident population, employees could be secured despite neglect. To be sure, centralization of hiring and firing had begun to spread in the nineties and later years. Also, an association of employment managers was organized in 1918, though it was concerned primarily with techniques of interviewing and selection and with safety measures. Under the conditions of the first World War, especially the increased turnover of employees, personnel managers came first to be appointed, but, as one of them later admitted, the development was not then healthy. All sorts of ill-considered schemes were "sold" to management, a large majority of which were abandoned in the postwar depression.

A new and sounder start was initiated by the appearance of two or three surveys of what employees were actually thinking, not what management believed that they ought to be thinking: Whiting Williams' *What's on the Worker's Mind* (1920), E. K. Hall's *Plea for the Man in the Ranks* (1923), and Sam A. Lewisohn's *New Leadership in Industry* (1926). (The latter two authors were themselves business executives.) In the meantime, the Hawthorne experiments (also sponsored by business executives) were getting under way; and institutes for the study of industrial relations, financed largely by businessmen,

were popping up at universities spread widely through the country. Before the depression struck, the minds of executives were in some degree prepared for its lessons. Progress in educating business leaders has since continued, though probably confused sometimes by the increase in economic power of labor organizations. Any halcyon day of complete management understanding of the aspirations of the "man in the ranks" may still be distant; but when businessmen who failed to think about their employees have been replaced by men who will listen to lectures on "human relations," progress in sophistication has surely come about.

My second, selected theme—altered time perspectives—has two facets. One is related to the revolution in accountancy. Prior to 1900, accountancy had its face turned predominantly to the past: what *had* been the financial results of a year's operations; occasionally what *had* been the costs of specific performances over a preceding time-period. With extended and improved cost accountancy as one base, with productivity appraisal to aid, and with controllers to act as agents, accountancy could do an about-face. Standards and the "rule of exceptions" (stated first by Taylor) made possible effective attention to current operations, while budgeting drew executives' eyes around to the future. McKinsey's book on budgeting, published in 1922, may come in time to be viewed as a turning point in business procedures. Surely when executives of a large corporation seclude themselves for a whole week to frame the operating budget for the succeeding year—as I know now to happen—economists need to take cognizance of this type of event. "Anticipations" has become a major process in business. Sophistication has bred forward planning of noteworthy dimensions.

Forward planning on a somewhat longer scale is the other facet to which I made reference. I have a feeling that the time horizons of our larger enterprises have lengthened appreciably as compared with the nineteenth century—although proof to substantiate this feeling is not as yet available. The integration of industrial plants with raw material supplies, which did to some extent take place in the latter nineteenth century but has continued to evolve in the twentieth, is outward evidence of a long time-horizon. So also is the creation of scientific laboratories within business institutions, and pension plans, retirement schemes, executive development, and the like, even the very elaboration of business hierarchies. The statement that a leading lumber company has a concrete program of timber-cutting extending over the next hundred years may relate to an extreme case; but it does appear that, unconsciously if not consciously, business concerns are acting as if they were endowed with perpetual life. The show *will* go on, whether it must or not.

The third and last feature of modern business life to which I seek to

draw attention is the changed objectives of the business unit. By this phrase I am endeavoring to cover several related developments. One is the willingness of entrepreneurs to vault old industrial lines if they think to find advantage in doing so. A producer of farm equipment turns to the manufacture of electrical refrigerators; a dyestuff manufacturer becomes a producer of synthetic textile fibers; and so forth. Business units have broken down any conceptual barriers that might tend to check their powers of survival.

Again, they have escaped from or conquered restrictive or compelling circumstances of a different kind. At one time, the mercantile spirit had accompanied merchants' capital into manufacturing, commercial banking, and railroad transportation, with consequences that were not always pleasant: selling-house domination of factories, rate wars, and the like. Later the all-pervasive need for capital, prolonged by the need of stocking a continent, gave power into the hands of investment bankers —again with consequences not always happy. More recently, in the twentieth century, production problems associated now with the newly appreciated national market have become again the chief focus of entrepreneurial attention—and this objective industrial entrepreneurs could take into their own hands, with marketing and financial functions more fully within their control than a half-century or century earlier. Production-mindedness is an inheritance from the nineteenth century, especially from the decades of the eighties and nineties; but, at that time, executives did not, it seems, have the tools or organization or information effectively to implement their aspirations. In business, apparently, as in other areas of social life, habits of thought can prevail beyond the period of their apposite value. Large-scale businessmen of the later nineteenth century still thought of themselves as small businessmen operating in a larger pattern; they must carry the office work as their forebears had before them; white-collar assistants were unproductive; etc.—with the result, as Professor T. C. Cochran has stated, that business was probably understaffed in a significant degree at the executive level. Now in the twentieth century—again perhaps partly as a result of Frederick Taylor—executives could build up organizations commensurate with the increasing complexity of business knowledge and the swelling flow of business information. Then, with selling brought within the ambit of the large business units, with financial freedom derived from a favorable trend of national savings and from prudent corporate policies, and with an expanded hierarchy of officers, each provided with adequate clerical personnel, the companies were free as never before to pursue their long-cherished aim of greater and better production.

Mr. Oswald Knauth, in a recent notable article ("Group Interest

and Managerial Enterprise," in the *Journal of Industrial Economics,* 1953, page 88), has suggested one important further consequence of these recent developments—perhaps a sort of multiplier-effect, such as Professor Jenks has sketched in connection with railroad development. The present-day activities of American business units, Mr. Knauth says, should be viewed as "centering around a continuous flow of production and distribution. . . . Not individual transactions, but policies to insure permanence are the dominant force which controls the action of management. . . . The object of management is to achieve a balanced flow at as high a rate as circumstances and ingenuity permit." And management can now call to its aid the services of market analysts, of advertising agencies, of public relations counselors, of management consultants, of cycle analysts, its own controllers, and a host of other auxiliaries from sales managers to Hollerith machines. Demand may be in some degree stimulated by product or house advertising; output can be controlled by internal auditing, productivity accounting, and other means, or stimulated by bogies and incentive payments; new products are yielded, often with embarrassing rapidity, by scientific research; interference from stockholders is minimized by broad stockholding; while a certain degree of stability is assured by self-derived reserves. Sustained, effective production through all-purpose entrepreneurship has become *the* economic objective of modern business.

Another feature of twentieth-century business that strikes the student as peculiarly important but seems not yet to have attracted proper attention is what I think of as the re-enforcement or "built-in" phenomena. Call it "concatenation" or "cumulation."[2] What I have in mind is the sort of change that took place in social life from the condition of self-dependent (or largely self-dependent) household units assembled in a small rural settlement, to the complex, intradependent communities which we call cities, where largely people follow economic lives by "taking in one another's wash." City life is viable and is strengthened by that intradependency.

So in business. In an enlarging economy, the opportunities for advancement—in *some* enterprise—provide an incentive to junior executives and even younger novices; and this circumstance in turn aids in the enlargement of the economy. Or, again, entrepreneurs seize the chance to erect ancillary business service institutions as soon as they believe such institutions to have a reasonable prospect of survival; and, in due time, the erection of such units, by improving the productive performance of their industrial and commercial clients, helps not only to

[2] My attention to this range of phenomena was first attracted by remarks of my younger associate at the Harvard Research Center in Entrepreneurial History, Mr. Donald E. Stout.

consolidate their own positions but also to strengthen the business system as a whole, insofar as an expanding national income gives social satisfaction. In such a manner, advertising agencies, market analysts, and the sales divisions of large business enterprises collaborate in the creation of demand for new commodities or novel types of old commodities; and, if successful, the effort strengthens the position of such business units and services and enlarges the economy from which they all derive their sustenance. Or, again, the advance in business sophistication has permitted business units to set up a sort of internal "circular flow" of ideas—sometimes called the employment of constantly revised "business policy"—which consists of a sequence of setting objectives, forecasting, constant appraisal of performance, and redefinition of objectives in the light of performance and possibly of changed external conditions—all proceeding on the basis of predetermined (and constantly rechecked) standards.[3] The planning, operating, even the reporting and revising elements of the enterprise are under continuing check; and the standards are also under constant observation; so that in the system is "built in" a means of improving the system, and performance in the enterprise has the potentiality, as it were, of lifting itself by its own bootstraps, of rising from one level of efficiency to a higher one.[4] Or, finally, the heightened prospects of semipermanence to the large corporation make sensible the institution of devices from predetermined standards of performance, or research laboratories, to the competition for favorable regard by consumers and the public at large, which in turn increase the prospects of semipermanence. Also such improved prospects of continuance foster the identification of individuals with the institutions of which they are significant members, with the result, so felicitously phrased by Professor Howard R. Bowen, that "the legal fiction [of the corporation as a person] has become a psychological necessity." (*Social Responsibilities of Businessmen,* page 87.)

Parenthetically I would note that these built-in features have relevance to Professor Innis' concern with survival over time. Yet here, in our democratic society, I see so far no evidence of the development of a monopoly of knowledge, such as Innis observed in other civiliza-

[3] Professor W. W. Cooper has given a diagrammatic presentation of this flow; *op. cit.*, p. 92. Professor Boulding sees some such mechanism common to all "behavior systems." See his *Organizational Revolution*, pp. xxvii-xxviii.

[4] If Professor Schumpeter has his Kondratieff, Juglar, and Kitchin cyclical movements, entrepreneurship may look on spiral motions of similarly varied time-dimensions. The longest is related to the media of information; that of moderate duration is concerned with the establishment of ancillary, service institutions; while the shortest is that of "business policy" formation. All are "re-enforcing" or built-in phenomena—in the sense that they are demanded or fostered by entrepreneurial activities, in turn give opportunity to other entrepreneurial developments (e.g., information-supplying institutions, ancillary service units, or appointment of controllers), and make feasible ever improving entrepreneurial performance.

tions. In fact, the past few decades have brought a diminution of the awe for the large enterprise, which was widespread a generation ago. In our politico-economic climate, the medium-sized company can survive, and grow, and shares in the same helpful dispositions or practices that benefit the very large corporations.

All of which foregoing tempts me to raise certain questions for economists that I am myself not competent to attempt to answer and perhaps have no place in my paper. I will be brief. An examination of entrepreneurial history—and an appreciation of the fact that, in the current diversity of entrepreneurial characters, history is in a sense still with us—has led me to wonder whether *one* delineation of "the businessmen" or *one* theory of profits is realistic. Would not economics be advanced by a fuller treatment of the entrepreneurial element than obtains in most economic analyses? Take the single matter of response to technological change. Professor Clarence H. Danhof (*Change and the Entrepreneur,* page 23) thinks that he sees at least four types or classes of commercial farmers in the pre-Civil War period: innovators, imitators, Fabians, and drones. And Professor Brozen's more general inquiries seem to substantiate broadly this conclusion for modern business. What are the economically defined classes of businessmen?

Again, students of entrepreneurial history make a good deal of the (much maligned) "organic" character of business growth. Major decisions, such as those of the nineteenth century in the location of railroad lines, affect all subsequent growth of the particular enterprises involved—and, to some extent, of the economy. Later decisions are conditioned by previous ones; and, sometimes for whole industries, such sequences of decisions yield not merely "sunk capital" but "sunk" skills and business connections and whole social complexes which together constitute important parameters within which enterprises, or whole industries, thereafter operate. Business life within its more modern units partakes of integrated growth rather than the abstract inputs of abstract capital and labor.

And this latter thought leads me to my third and final observation: the changed (and changing) character of entrepreneurship has tended to draw managerial attention away from the income statement—close observation of which is implied by any theory of the maximization of profits. Nor have the managers' eyes fallen too attentively upon the financial balance sheet. If a theoretical concept must be applied to their activities, it is the maximization of the present value of an indefinitely long series of secure and socially permitted profits, with the specific business unit in question receiving its share (or perhaps a moderately increasing share) of the total market for its products. Location, raw material reserves, public relations, employee relations, training of future

executives, and all other major conditions and relationships are viewed as organized and susceptible of constantly reviewed organizational redispositions, so as to bring in a "continuous flow" of reasonably satisfying and sustaining net income. The maximization of the present value of this future stream—which, of course, would not form a meaningful concept for business executives, only for us ivory-tower economists—is sought, not primarily from a broadening of the stream itself, but rather from a diminution of the uncertainties in the flow; so that a stream of acceptable size will in fact arise in the anticipated conjunctural conditions and flow steadily to the company's coffers—this year, next year, and for *x* years hence.

To an audience such as this, I need not, I am sure, specify various ways in which advances in entrepreneurship over the past half-century have failed to approach "plus infinity" in relation to economic change. One must take into account a score of factors, from the development of new natural resources to the spread of education. Even within entrepreneurship itself, every problem has not been solved. The growth of bureaucracies has given occasion for manifold worries among observers, despite the managerial innovations that have tended to mitigate some of its impacts and despite some contentions, such as the recent one of Mr. Peter L. Bernstein, that technological progress is more likely to take place in large than in small business. ("Profit Theory—Where Do We Go From Here?" *Quarterly Journal of Economics*, 1953, page 412.) Not least of the problems of bureaucracies in business is the conflict between a status system and the concepts of democracy, to which Professor Boulding makes reference.

Perhaps more significant over the longer run are certain features of entrepreneurship closely allied to its modern character. One is the obverse of Professor Bowen's allegation that a legal fiction has become a psychological necessity. Identification of the individual—manager or workman—with a business organization is obviously desired by businessmen, as seen in pension plans, stock-ownership plans, and the like. But such devices tend to restrain the movement of talent—high and low—into positions where it would be most productive. Short-run business considerations—increasing morale, decreasing turnover, etc. —appear to have outweighed possibly greater long-run social advantages.

Secondly, the problem of ultimate control in large business organizations is unsolved. Though modern large corporations are financially oriented, their officers are, at least during periods of reasonably successful performance, relatively free from stockholder, i.e., real ownership, control. Now the executives of such enterprises think of themselves as balance wheels, as I have already suggested; but (*a*) if they are to be

adequately oriented as such, they would not merely hold some stock in the company; they would be members of the trade unions operating in their plants, and they would be representatives of organized consumers; and (*b*) they have only their self-generated and self-approved rules as to how the benefits or net revenues of their concerns should be distributed. When management has achieved an increase in productivity and, at least for a time, some enlargement of earnings, to whom should the new funds be disbursed? Despite the pretences of economic theory, what possible scientific basis can there be for dividing the added profits in one or another fashion, or for not passing them on wholly to management or the consumer or labor or the stockholders? For leading thinkers among businessmen, says Professor Bowen, "the acceptance of obligations to workers, consumers and the general public is a condition for survival of the free-enterprise system"; but under what rules or with what objectives should they exercise these obligations?

A somewhat affiliated consideration is the alleged professionalization of management. While corporate leaders have indeed gained some of the detachment which we associate with the ideas of a profession, they have no operable code of approved practices, nor any guild to enforce compliance with that code. American trade associations with few exceptions have not risen to their "social responsibilities."

It is a curious but perplexing historical phenomenon that, while peoples nearly everywhere, at least in the Western world, have worked out somehow such instrumentalities as bills of rights, checks and balances, court systems, and the like to govern their nonbusiness relationships, they have never created a political system within business circles, except on the administrative side, that is much more elaborate than New England town governments.

But I have wandered far afield. The points that I wish to make are, briefly stated:

1. Entrepreneurship, or the leadership in business, is in constant flux. One cannot dismiss this phase of economic life by evoking a stereotyped "businessman." Both how he operated and why he acts as he does deserve extended research of social scientists. Already the study of the social sanctions and cultural themes influencing business leaders have been characterized by Professor Boulding as "one of the most challenging—and tantalizing—propositions of what may be called the 'larger economics.' "

Most, if not all, of what I have said could just as well, if not better, be expressed in terms of role theory—cultural themes, sanctions, in- and out-groups, role structure, and the like—as worked out by my friends, Professors Jenks, Cochran, and Redlich. One way of formulating my ideas would be that changing social and economic sanctions

have altered the parameters within which business decisions, at least of large corporations, must be made—decisions, relative both to operations within the establishments and those that affect relations with external elements.

2. The transformation which American entrepreneurship has experienced in the twentieth century has in a real sense altered fundamentally the nature of the economy. Business units largely owner-managed, with tremulous time-horizons, with amateurish internal controls, and guided by scarcely any intellectual concepts, have become units of sophisticated outlook, operated by professional managers, each a sort of small fraternal order, complete with tenets, procedures, hierarchies, a belief in their own permanence, and even some apperception of their own weaknesses. The problem of growth and decay within business units deserves an increased attention. To be sure, whether these new institutions can pass the tests of social criticism, can meet the demands of contemporary (and future) cultural themes, remains yet to be seen. Quite surely they are in greatly stronger position so to do than the business units of 1900—so little in tune with the changing social sanctions of that period.

3. There are, buried in entrepreneurial behavior and modern business procedures, modes of activity which have pertinence for economic theory and for the consideration of economic growth. Most of these are tied in with the survival and aggrandizement processes of individual business institutions and point toward a possible reorientation of our theoretical structure. Perhaps built-in propensities of our entrepreneurial economy deserve to rank with the injections of capital and the contributions of technology in the description of the world we live in and in the explanation of economic change.

4. Finally—with somewhat the same *non sequitur* with which Mr. Babson used sometimes to conclude an economic discussion with a plea for more religion—I would contend that the study of entrepreneurship and its evolution provides a natural bridge between explorations in economics and in business administration—indeed, for research in all the social sciences and history. The larger economics of which Professor Boulding speaks will require a grasp of sociological concepts as well as business facts, an understanding of the historical evolution of social thought as well as a competence in economic analysis. With proper exploitation, this area of economic history can become integrated with economic and sociological theory and can hope to attain the stature of at least a handmaid to the elaboration of public policy.

# ON THE CHANGING APPARATUS OF COMPETITION

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Perhaps the most striking characteristic of the economic literature of the past quarter-century has been the preoccupation with the problem of small numbers. Out of the welter of descriptive and theoretical writing has come the conviction that the "decline of competition," demonstrated by Professor Arthur R. Burns nearly twenty years ago, continues. If we may judge by the volume of testimony which still appears in the journals, in monographs, and in recent textbooks, the conclusion is unavoidable that the orthodox presentation, developed by the late thirties, is almost unanimously accepted by professional economists. Those who have described the oligopoly structure of modern industry, as well as those who have constructed the theoretical organon which presumably explains the determination of prices, have won out. Few would raise serious questions about this major proposition of economics —that competition in the American economy has persistently declined. Or at any rate this has been so until quite recently.

All along there have been indications that the accepted theory of pricing in monopoly and oligopoly is irrelevant to the historic problems of public policy. We continue to find useful for predictive purposes the traditional supply and demand analysis—with no more refinements than were added by the first edition of Marshall's *Principles*. Professor Joe S. Bain has remarked on the evidence that in some industries characterized by fewness there is a prolonged tendency to hold prices well below the level which would maximize net revenue for the constituent firms of these industries. ("A Note on Pricing in Monopoly and Oligopoly," *American Economic Review,* March, 1949, page 448.) Nor can we fail to be impressed with the pressures which competition in some form appears to exert on entrepreneurs of both large and small establishments. Scrutiny of the market place does not reveal the behavior which is supposed to be characteristic of executives of large firms in an oligopolistic industry, for these officers apparently are unable to settle back comfortably in happy anticipation of dividing a monopoly profit which by explicit agreement or by "doing what comes naturally" is theirs.

Indeed, on one score modern orthodoxy, following Schumpeter, has taken comfort. It is not hard to show that the rapid technological change of the past century or more makes the large firm inevitable and that in

many manufacturing processes a few large firms can achieve greater output and sell at lower prices than could many small ones in an atomized industry. Yet the conviction persists that bigness portends ill for the household unit. Classical economics concluded that, except in unusual circumstances, the consumer need not fear the power of any seller, that he would always have the protection of the inexorable forces of the market place. The implication of nearly all the recent literature on imperfectly competitive markets has been that the built-in protective mechanism of the competitive process is gone.

We are thus confronted with a paradox. By any measure we choose to take the American consumer has been progressively better off over the past half-century. But in an economy bowed down by monopolistic restrictions this cannot be! How has it come about that, despite the omnipresence of oligopoly, more and more of this world's goods and services have been made available to the run of humankind?

During the past four years solutions to the paradox have been forthcoming. In a clever and, I thought, telling way Professor Clair Wilcox at these meetings four years ago suggested that oligopoly is not ubiquitous as alleged, but his argument—that the part of the consumers' dollar which goes to pay for goods made by oligopolies is fairly small—was promptly dismissed as a quibble.[1] Professor Galbraith has contended that countervailing power comes to the consumers' rescue, though, by his own admission, not effectively during inflationary periods (*op. cit.*, especially pages 133-139). Others have asserted the possibility of an effective, protective competition among commodities and among industries without, however, indicating what the limitations of such competition may be.[2]

The advocates of reliance on a "new" competition for defense against the evils of monopoly power imply that in this mechanism alone will be found the solution to a great policy problem. More specifically, they contend that, especially since 1939, interindustry competition and, to a lesser extent, competition among products and processes within certain industries have caused oligopoly power to wane. Demand functions nowadays, it is argued, have for any firm lost the dependable stability

[1] Clair Wilcox, "On the Alleged Ubiquity of Oligopoly," *American Economic Review*, May, 1950, pp. 67-73. See E. H. Chamberlin's reply, *ibid.*, pp. 101-103, and that of J. K. Galbraith, *American Capitalism* (Cambridge, Mass.: The Riverside Press, 1952), p. 42.

[2] The question of interproduct and interindustry competition has received considerable attention in the last year or so. See David E. Lilienthal, *Big Business: a New Era* (Harper and Brothers, 1952), pp. 47-94; Sumner H. Slichter, "The Growth of Competition," *Atlantic Monthly*, November, 1953, pp. 66-70; A. D. H. Kaplan, *Big Enterprise in the Competitive System* (The Brookings Institution, 1953); Edward S. Mason, "The New Competition," *The Yale Review*, Autumn, 1953, pp. 37-48; Harry D. Gideonse, *The Economic Foreign Policy of the United States* (Cairo: National Bank of Egypt, 1953), pp. 14-30. Compare with Arthur F. Burns, *Production Trends in the United States since 1870* (National Bureau of Economic Research, 1934), pp. 120-162.

which used to characterize them and have become much more elastic than they once were. The first part of this paper suggests the sense in which these contentions are valid and incidentally points up practical (and technical) difficulties in the way of verifying the nature of the competition.

## I

It is deceptively easy to make generalizations about the nature of interindustry and interproduct competition. Casual observation tells us what we may readily verify by a glance at the relevant figures. Television has hurt the motion picture industry badly, has changed radio production altogether, has raised real problems in the spectator sports industry, and has even affected book sales and the custom of restaurants. The rapid acceptance of frozen foods has adversely affected the output of canned foods, and with the growing demand for service items in food stores, new containers of all sorts are replacing the glass and tin ones. Detergents have gained favor at the expense of soap, oleomargarine at the expense of butter. And so on and on. Anyone who wishes can make quite a game of taking the products or services in slowly growing or declining industries and trying to find the product or service in rapidly growing industries which is undoing them.[3]

If it be thought that examples from the markets for consumers goods do not go to the heart of the matter, we can readily adduce evidence of the same phenomenon in the producers goods industries. The best examples are well known in a general way. Motor truck transportation and air transport have had their extremely rapid growth at the obvious expense of railway freight and passenger miles, with the private automobile a major force on the passenger side. The man-made fibers have competed directly and successfully with the natural fibers and are now hard at it to find their own lodgment in permanent markets. Since World War II new materials have been very much in the news. Among these the phenolics, the polyester resins, the silicones, and nylon have been prominent and have caused a genuine upheaval in the competitive situation of many end products.

But such reflections are of no help in analysis. To assess the competitive situation of a firm we must still resort to counting numbers. We cannot do away with the group, for the group exists in the real world. Yet counting only those firms which are within the "industry" tells us very little We must do our counting by taking categories of uses for the output of an industry, considering what products of other industries

[3] For the table which enables the economist to entertain himself in this way, see Louis J. Paradiso and Francis L. Hirt, "Growth Trends in the Economy," *Survey of Current Business*, January, 1953, p. 9. See also *Markets After the Defense Expansion* (U. S. Department of Commerce, 1952), pp. 50-57 and pp. 65-72.

directly compete within these categories. This is not easy because of the requirement for understanding so many varied technologies.

Consider the aluminum industry. Before World War II the Aluminum Company of America was the classroom example of monopoly in a nation-wide market. Since World War II this industry has been the classical example of an oligopoly, with only three firms to harass the drawer of cost curves and revenue curves. It is possible to speak of a demand for primary aluminum, but of course what is meant is the demand for some 106 wrought and casting alloys in many different shapes of innumerable lengths and thicknesses. It is impossible to compare these alloys with those of the other metals without specifying uses.

To be specific about the competition of aluminum with other metals in categories of uses, consider first the category of electrical cable and conductors. It is well known that aluminum and copper compete in this use, but it is not enough to remark the fact and pass on. The essence of the competition is in the "bundle of properties" of the two metals, the two bundles having marked likenesses and differences. (Kaplan, *op. cit.*, page 19.) Both copper and aluminum have high electrical conductivity, the Electrical Conductor Grade of aluminum meeting the usually specified minimum conductivity requirement of 61 per cent of the International Annealed Copper Standard. But the specific gravity of aluminum is slightly less than one-third that of copper, so that the mass conductivity of aluminum is twice that of copper. Thus, a steel-reinforced aluminum cable, both stronger and lighter than an electrically equivalent copper cable, results in longer spans and fewer supporting structures. Given aluminum and copper prices prevalent in the last few years, copper has almost entirely lost the high-voltage transmission line business and is rapidly losing in the so-called secondary distribution field. At the other extreme, copper has a decided advantage over aluminum where wire of fine sizes is used and the space factor is important. Between the two extremes there is a vigorous, persistent competition on a pure cost basis, where costs included are those of product design, investment in tools and dies, etc. Large motor windings, power and feeder cable, and bus in central power stations are today alternatively made from either material. In this use four firms in the copper industry and their copper and brass fabricating subsidiaries are direct rivals of the three aluminum companies.

Consider another use category. In the field of die castings, aluminum alloys are making great inroads on zinc castings, long dominant in the field. Here there is also competition with the brasses, and more and more with alloys of magnesium and with the plastics. When we bring sand and permanent-mold castings into the use category, we must include almost any metal that can be melted, grey and malleable iron and

cast steel being the chief additions to the competition, which is decided, once weight, strength, and finish have been considered, on a basis of costs, including those of dies and machining.

The rivalry between aluminum and the steels becomes very keen in the manufacture of truck, van, and trailer bodies (where magnesium and wood are also factors) and in certain construction uses. In the making of truck bodies the competition between aluminum and steel becomes essentially a cost matter. The higher cost of aluminum bodies is generally much more than offset by the greater average pay loads, reduced license fees, and increased tire mileage consequent upon lower weight. In construction uses the advantage, as in the case of industrial windows, may turn on savings in maintenance costs.

As we proceed through the main use categories the metals appear and reappear; as unlikely a competitor as lead is an alternate material in at least two uses (collapsible tubes and cable coverings). The plastics, too, reappear and wood, rubber, fiberglass, and even conventional building facings like brick and stone enter into the system of alternatives.

In total, the number of competing firms rapidly moves from "few" to "many," but two objections may be raised. In a particular use—say, castings—the competition is with a hundred or more producers of primary materials outside the aluminum industry; yet the number may reduce to four outside the industry in the case of conductors. It appears, however, that as we cut across industry lines the conditions of rivalry are much different than in the case of intra-industry competition. The managers of firms, because of the limitations of being human, cannot have the technological or accounting knowledge which enables them to predict reactions of other-industry rivals as well as they can those of rivals within the industry. But it may be further objected that the aluminum industry is left, after all such considerations, with a hard monopoloid core. Although there is an ever growing list of alternative materials, aluminum is still economically necessary in the manufacture of structural parts for aircraft. Here, of course, many of the alloys commonly employed have a host of applications, but the high-strength alloy used for the skin of an airplane will likely have this as its chief use. It is conceivable that the three companies in the industry could collude, tacitly or explicitly, in discriminating against the airplane manufacturing companies, especially in view of the fact that aluminum from the secondary market would not be suitable for such a purpose. It seems highly unlikely that discrimination to maintain a monopoly position in so small a market would be worth while, but this is a fact that has to be ascertained. To say the least, the problem of monopoly in the aluminum industry is narrowed to manageable proportions.

Our example worked out almost too neatly. It may be that metals by

their very nature are likely to serve in many alternative uses. Consider another industry which always appears high in a list of industries ranked according to degree of concentration. The chemical industry makes products of great diversity—some going into further processing, some moving into end uses. Any attempt to consider fully the nature of the industry's competitive position is impossible in so short a space, but we may indicate how it can be done.

If we should suspect a strong element of monopoly power with regard to any product of the chemical industry, it would be in the manufacture of the heavy chemical—sulfuric acid. Sulfuric acid is made largely from mined sulfur (brimstone), though it may be made by converting either the pyrites or hydrogen sulfide. Control of the sulfur deposits, as is well known, is highly concentrated in three companies. Thus, even though sulfuric acid is manufactured by eighty-odd producers, including firms in the meat-packing, rubber, petroleum, copper, lead and zinc, and distilling industries, the possibility of monopoly control is apparent. Sulfuric acid is highly important to many processes, and any considerable restriction of output would be a serious matter. But into what uses does sulfuric acid go? Its greatest use is in the fertilizer industry where it is employed in acidulating phosphate rock and in reaction with ammonia to form ammonium sulfate. Now anyone faced with upward pressures on the price of sulfuric acid can go over to nitric acid, though he is inhibited by a high capital investment in the sulfuric process. Nevertheless, in the event of strong monopolistic pressures such a transfer would be possible as it became necessary to replace equipment. Of late, however, there has been a tremendous growth in the demand for anhydrous ammonia as a fertilizer. It appears that nitric acid will more and more be used in the fertilizer industry, and some firms making present expansions are turning to nitric processes. But synthetic ammonia, from which nitric acid is obtained, is made from natural gas. By this roundabout process the basic producers of sulfur and of natural gas are brought into competition with each other—and the foundation of oligopoly power is shaken.

To the objection that there are other uses of sulfuric acid for which there may be no economic alternative, the rejoinder can only be made that this, too, is a matter of fact which must be definitely ascertained. In making phenol, for example, two-thirds of which goes into the production of phenolic resins, the basis of the thermosetting plastics like Bakelite, the sulfonation process is a key one, but the regenerative process (benzene and hydrochloric acid), the cumene process (benzene and propylene), and the chlorobenzene process (benzene, chlorine and caustic soda) are economic alternatives. If monopoly power is exerted on the price of sulfuric acid, at no matter what stage, the sulfonation

process becomes a higher cost one and will be replaced over time.

Or we may turn from the example of a heavy chemical to a product which goes directly into several end uses, which is patented by one company and manufactured by others only under licensing arrangements, and for which there is in one use no satisfactory and economic alternative. Nylon furnishes a simple illustration. As a fiber used in the manufacture of ladies' hose, nylon at present enjoys an almost invulnerable position. We may talk all we wish about competition from other fibers in this use; the fact remains that because of dimensional elasticity, high resistance to abrasion, and the possibility of turning out sheer, lightweight yarns as low as twelve denier, nylon is almost by itself as a hosiery material. It would be easy to assume that the Du Pont Company has adopted a policy of establishing a monopoly price on nylon in its sales to hosiery manufacturers. Yet the figures, while by no means conclusive, indicate that such a policy was probably not followed. Thirty-denier nylon yarn dropped from $4.27 per pound in 1939 to $2.70 a pound in 1948, with no change in price during the inflationary years since then. Production of nylon meantime increased twelve fold.

The basic reason for not following a policy indicated by the theoretical model is readily apparent if we look a little further. The company found it more profitable to forego monopoly control in one use in order to push the commodity into many uses. Nylon has gone into other apparel items in which interfiber competition is keener. With a tensile strength of seven grams per denier, nylon is almost twice as strong as the super-rayons which have superseded cotton in the tire industry, but its cost is more than two and a half times that of rayon. With its greater strength, less nylon can be used to produce an equivalent tire and is an economic alternative to rayon in the manufacture of large-size, heavy-duty truck and airplane tires. At the moment nylon can be used only in the manufacture of premium automobile tires, but an approximate 20 per cent further reduction in its cost will enable it to become in this manufacture directly competitive with rayon. Further, nylon is being used as an alternate to many metals in the manufacture of molded parts such as gears, bearings, and bushings. We have thus inverted our reasoning to indicate how, in the introduction of a material, protection against monopoly power lies in the aspirations of the innovator with respect to new uses.

It is too much to assert that interindustry and interproduct competition give complete protection against monopoly power. The insistence is that a simple counting of the number of producers within an industry is a poor way of coming to an evaluation of a competitive situation. Two points may be made at this juncture. First, the competitive forces, of which we have just taken examples, are at work through time. It may

require years for a change to be made from one process to another, from one material to another. But we have known this all along, and no one contends that, in assessing the merits of a competitive system, we should be concerned about the possibility of temporary abnormal profits. Second, making allowances for interindustrial and interproduct competition, it is possible that the monopoly core left to some industries may still be large. Again it is a question of the facts of the matter. For nearly a century, there has been no close competition to the steels in a large number of applications where weight, strength, and durability are of primary importance; rails, heavy structural members, pressure vessels, heavy machinery, etc., are examples. But in a century we are all dead, and the prospect of competition in a number of uses as of today is no comfort to those who have been exploited. Even as the competition takes place today, the marginal effect on the steel industry is much smaller than that in industries competing with it. For example (on the basis of data relevant at the moment), if all automobile license plates presently made of steel were to be made of another material, the loss to the steel industry would be approximately .02 per cent of 1953 output. Yet if aluminum were to gain this business for any one year, it would mean an increase in output of nearly 1 per cent.

## II

Such considerations as the foregoing have a certain cogency, and it seems to me that investigation along these lines is merited. But we have thus far been concerned largely with products exchanged in the producers' market. When we pass to the consumers' market it appears at first as though the alternatives which so readily presented themselves among materials and processes are no longer to be found. The familiar lists of highly concentrated industries show that one consumer good after another is largely produced by few firms. Automobiles and whiskey, refrigerators and cigarettes, rubber tires and television sets are manufactured under conditions which bode ill for the poor consumer, for surely he cannot in any important sense substitute one such good for another.

Of course the businessman would rejoin that he "competes for the consumer's dollar," a proposition which the economist recognizes, somewhat derisively, as having a certain validity. Yet this generalization sheds little light, for it is incontestable that certain outlays will be required by any consumer in the several categories of expenditure. But on what basis shall we arrive at a taxonomy of expenditures?

For generations there has appeared and reappeared the notion that the theory of consumption should focus attention on the service flow which a consumer good yields over time rather than upon the good itself.

It is apparent that the only thing which human beings can consume is a service. Since Fisher, several have recognized the validity of this concept while continuing to cast the theory in terms of discrete goods. Professor Wassily Leontief has suggested a theoretical way of giving "operational meaning to general categories of consumers' needs representative of distinguishable sub-groups in the class of all consumers' goods" but makes no suggestion as to how the needs may be realistically classified ("Introduction to a Theory of the Internal Structure of Functional Relationships," *Econometrica,* 1947, page 372).

The massive, if controversial, contribution of C. Reinold Noyes reminds us that there may no longer be any reason for reluctance in relating economic ends to human wants as modern psychology views them.[4] It appears possible, though by no means easy, to classify the service flows of consumer goods in accordance with the needs (wants) of the human organism. A convenient classification of needs—one which would be acceptable to psychologists generally—is that of viscerogenic and psychogenic needs. The former, or primary, needs arise from man's neuro-physiological make-up. The healthy organism tends to maintain itself in a state of neuro-physiological equilibrium but is subject to continual pulls away from equilibrium. Whenever the organism is in a state or tendency which throws it off balance, a need to restore balance—to achieve homeostasis—arises. Thus, the need for oxygen, water, food, excretion, avoidance of heat and cold, and the like require certain service flows, some of which may be noneconomic, for their satisfaction, for the restoration of balance. The psychogenic or secondary needs—those occasioned by tensions dependent on conditions outside the body such as the need for play, for superiority, for achievement, for recognition, for exhibition, for order, for dominance—give rise to the demand for perhaps the greater part of the services which a modern economy provides.

An attempt to link up the demand for service flows on the part of human beings with the needs (wants, tensions) which they remove is outside the scope of this paper.

An example, however, illumines the nature of competition among both sellers and buyers. Household appliances in large part remove the want to economize activity which seems to be biologically necessary. Specifically, an electric refrigerator and a vacuum sweeper provide a service flow which enables the members of a household unit to avoid

[4] C. Reinold Noyes, ***Economic Man in Relation to His Natural Environment*** (Columbia University Press, 1948), 2 Vols. I use the expression "reminds us" because this was the approach suggested nearly a century ago by Richard Jennings in *The Natural Elements of Political Economy.* For a discussion of his treatment of the "sensations of consumption," see Ross M. Robertson, "Jevons and His Precursors," *Econometrica,* July, 1951, pp. 234-237.

expenditure of energy. That the two appliances perform different operations is only incidental. The refrigerator makes it unnecessary to empty water pans and chip ice with a pick; the sweeper makes it unnecessary to wield a broom or a rug beater. From the point of view of the individual allocator of income, one way of conserving effort may be clearly preferable to the other, but the fact remains that he has a wide choice of alternatives. In this sense there is a close, direct rivalry among producers of goods which at first thought seem to be widely separated in the scale of choices. Thus a rough count shows nearly 250 manufacturers of nationally sold household appliances in the so-called "laborsaving" category, enough to assure competition in the classical sense. Over the past half-century it appears that the appliances have themselves competed with the manual labor of domestics who formerly performed the chores of washing, ironing, rug-beating, etc.

One complication may be mentioned. It will ordinarily be unusual for the service flow of a good to satisfy only one need. Although our example largely avoided this complexity, more often than not the service flow will be directed at a constellation of needs. Thus, the service flow from dress removes not only the obvious physiological needs but also helps to satisfy the want for recognition, for exhibition, and so on. Indeed, the notion of product differentiation can be made more meaningful if we think of differentiation as the attempt on the part of sellers to enlarge the constellation of wants toward which the service flow of a product is directed.

The readiness with which one service flow may be substituted for another to remove a need for, say, recognition thus leads to a much closer competition among functionally unlike goods than we would at first imagine. On the demand side of markets, two other forces appear progressively to stimulate a vigorous, churning rivalry. The growth of the institution of consumer credit and of modern forms of urban residential credit enable the household unit to economize in much nicer fashion than was possible before World War I. Until half a century ago most consumers could allocate income only within a very narrow range of choice—to the purchase of crude foods and liquors, rough clothing, and rental housing. Since the early twenties household units have more and more been able to refine their acceptance of service flows in the present and to arrange these flows to any desired degree of precision over time—for the simple reason that, within the limits of income, service flows in large chunks need not be paid for in one sum. At any moment a much larger number of bidders are thus brought into the market for manufactured goods on the buyers' side, assuring that the auction will not be concluded on thin trading. Again, this is what we mean by competition.

One further point and I have done. Four years ago Professor Tibor Scitovsky, in his article, "Ignorance as a Source of Oligopoly Power" (*American Economic Review,* May, 1950, pages 48-53), attributed to the ignorance or inexpertness of buyers a considerable source of oligopoly power. For, he argued, such ignorance enables a firm to seize and hold the custom of buyers who, through lack of knowledge, will not leave it, and entry into an industry is thus limited; further, such ignorance is inevitable in a technical civilization.

Ignorance lessens competition, to be sure. But the kind of ignorance which lessens competition is not the kind which troubles us today. Surely in the producers' market technical knowledge is more and more readily available to the small firm. And it is almost equally certain that we cannot base our reasoning about consumers on the premise that they are largely mental defectives who cannot tell a good cook stove from a bad one. A little reflection tells us that the very defects of the modern educational system which most of us deplore make for a rather savvy bunch of customers—who are pretty good at selecting a television set even if they cannot parse a sentence or do a problem involving ninth grade algebra. I see no evidence that American firms—especially the very large ones—foist bad products on people incompetent to make choices. In fact, the evidence is quite the other way around, and we are on far better ground, it seems to me, when we think of product differentiation in terms of its psychological basis, divorced of ethical connotations.

## III

I have purposely avoided any remarks on the involved subject of whether monopoly as a structural form is evitable or inevitable, bad or good. (Compare J. Jewkes, "Monopoly and Economic Progress," *Economica,* August, 1953, pages 197-214.) I have simply contended that there is probably not as much of it, in any meaningful sense, as we have supposed, for the reason that the old-fashioned apparatus of competition works in new ways to save us. If this is not so, we are indeed lost. At any rate I for one have no faith that an untrammelled monopolist will fail to exercise his power or that a countervailing monopolist will let us all share the fruits of his good works.

These remarks, intended only as a commentary on the intricate apparatus of competition, may not, however, be without policy implications. In a recent essay Professor Mason complained that Mr. Lilienthal and the other "disciples of bigness" do not offer tests of what may be allowed in the way of market power. No such tests will be forthcoming so long as interindustry competition is described at a level of generalization or analyzed with the tools of a static model. What is

essential is a taxonomy of product categories pertinent to the problem of market power. The task appears as formidable as the classification of bugs must have seemed to a seventeenth-century biologist, but I see no way around it.

Nothing will do but a painstaking inquiry into the technical alternatives in the producers' market and the psychological basis of choice in the consumers' market. The strata of like categories cut across the traditional demarcations of industries, and we can discern the interindustry competition only by grubbing for the relationships of the market place. This kind of endeavor does not bring the sweet satisfaction of theoretical analysis or historical generalization. But it can keep us from making mistakes. It may keep us from wielding the antitrust club on a large firm with respect to the whole of its output when it is only necessary to attend to certain items comprising a small portion of total sales. It may prevent the prosecution of firms in an industry already sick and declining consequent upon the encroachment of a new one. It will surely remove all possibility of complaints filed against a company which produces a product in direct competition with the alternatives manufactured by the firms of half a dozen industries. It will, in short, enable us to isolate with reasonable certainty the areas in which there is latitude for price manipulation by sellers. It is my guess that these areas are much smaller than we have supposed them to be.

With the remark of Walter Eucken, that the propositions of economic theory do not necessarily say anything about conditions in the real world, we should all be agreed. But if the postulates of the theory are not institutionally relevant to at least some of the problems of policy, people will conclude that economic theory, like art, is useless.[5] Indeed, economists in their efforts to become scientists are in danger of becoming artists. When this is so, policy-makers will turn more and more for advice to political scientists and sociologists—who have no discipline but who are better than we at problem solving.

[5] "We can forgive a man for making a useful thing as long as he does not admire it. The only excuse for making a useless thing is that one admires it intensely. All art is quite useless."—Oscar Wilde.

## DISCUSSION

FRANK H. KNIGHT: When I took on this assignment, I expected the papers to be more explicitly concerned with the entrepreneur and his role in economic change and with profit as his distinctive income—more than turns out to be the case. Neither paper deals with concepts and principles in a way to throw down a direct challenge to a theorist, the standpoint from which I speak. I do not presume to criticize history as such. My chief response to the papers has been to learn from them, and in that regard I have found both very interesting and valuable. They do, however, by implication raise theoretical issues which invite comment.

One thing I miss in these papers, as in discussion generally in the field, is any use of words recognizing that profit means profit *or loss* and is in fact as likely to be a loss as a gain. It is surely a significant fact that although the entrepreneur is dynamically the central figure in our free enterprise economy, his function in its purity and on the whole does not seem to share in the fruits of production, or even shares negatively. For both theory and statistics indicate that on the average the entrepreneur pays the productive agents he hires—labor and property—more than they actually yield and takes a lower remuneration for those which he furnishes himself. This is important both for interpretation or theory and for policy determination. In a scornful reference to "profit-maximizing" as a business objective, Professor Cole follows up an observation he made several years ago about the present unsatisfactory state of profit theory. A more explicit reference could have started an argument about the kind of profit theory that is possible and what may be expected of theory in this connection. In any case, doubts about profit-maximizing as a motive would sound differently if this were bracketed with loss-minimizing, as it should be, to accord with the facts. Certainly those who actually make business decisions do not always strive to increase profit, when they are making a profit, to the exclusion of all other concerns. No theoretically sound statement has any such implications. But when the profit is a loss, the pressure to decrease it is far more imperative, even if still not always overwhelming, as it bears on corporation officials in their representative capacity. Moreover, high profits are never secure and usually not long continued; so that to avoid loss in the long run a business must strive for high returns when they are to be had.

The zero or negative value of profit on the whole further suggests that entrepreneurship is especially affected by a noneconomic interest which pervades all "economic" life: I mean the game spirit, the desire to achieve, to surpass, to win the race—and no doubt the gambling motive itself, as well. But the significance for policy is that entrepreneurial and other business activities need to be "interesting" if they are to be adequately motivated; and being interesting is at least comparable with "efficiency" in intrinsic importance. Insofar as either winning or gambling is a motive, there is no mystery about the activity as a whole receiving no "pay," or less than none. The losses in these pursuits must at least equal the gains, and prizes won may well add up to less than they cost by an indefinite amount.

The main theoretical point with respect to Professor Cole's rather contemptuous reference to profit-maximizing may be stated more specifically. He quotes Joel Dean to the effect that this concept "has become so general and hazy that it seems to encompass most of man's aims in life." But this is true of all economic interests; they impel to the effective use of scarce means in the achievement of whatever end is in view. Cole goes on to "urge merely that, instead of patching old theories, perhaps economics would gain from a fresh effort to develop new basic concepts more fully in tune with contemporary business procedures and performance." But I have found in the paper no concrete suggestion of such new and basic concepts, though I have read and listened attentively. Moreover, I cannot imagine any economic concepts that would replace the motive of "economy," of which profit-seeking is one manifestation. For profit is simply the difference between a value-output and a value-input in an enterprise, and the value input is the worth of resources for the next best, or next better, alternative use. Disavowing all prophetic gifts, I still say confidently that as long as this world is this world and men live in it, resources will be scarce and men must strive to make them yield more rather than less. Hence they will endeavor to apportion resources among enterprises so as to favor the ones which make them yield the larger return. The alternative to private entrepreneurial "competition"—to make a gain and avoid a loss—would be the assumption of the function by "the state," using the sanctions of the criminal law, as we have seen undertaken in Russia.

Dr. Robertson's paper I must wholeheartedly approve and commend, as to its general drift. I also found it useful in stressing the complexity of reality against the simplifications of theory, without implying that theory is superfluous, if correctly formulated and intelligently interpreted and applied. It is especially gratifying to see it clearly and cogently shown that "competition" is far more effective in reality, and monopoly power far more limited, than is commonly inferred from superficial and prejudiced observation or from over-simple statistical counting. Here empirical accuracy re-enforces old theoretical reasoning. Objectively-minded people have known this, from common observation and common sense. The simple, rudimentary analysis involved was developed long ago in Marshall's chapter on joint and composite demand and supply. But the fashion in the profession has run to finding reasons for other beliefs. One may hope that Dr. Robertson's paper is another sign of a turn in the tide toward seeing and facing realities, even when they are not favorable to projects of easy social reconstruction.

Since it is the special duty and the privilege of a discussant to find something to criticize, I will point out one or two lacunae in the presentation, and lines along which the argument could have been carried farther. A discussion of monopoly might perhaps have said something about price discrimination, in which great ingenuity is often exercised and expense incurred; and might also have mentioned "unfair" methods of competition and even the problem of patent law. More interesting to the theorist is the possibility of developing the argument in a way which would have tied it in with the fundamentals of entrepreneurship and profit, and would drive home its profound significance for social policy. Robertson seems rather apologetic in pointing out that the forces

of competition become effective "over time" and, in words recalling Keynes, remarks that "in a century we are all dead, and the prospect of competition . . . is no comfort to those who have been exploited." Very true, where exploitation is real. But it should be equally stressed that it also requires time to build up a situation in which a product will bring more than current costs over a longer or shorter interval; and it involves risk as well as outlays. Some of those who incur these costs at these risks get them back—some more and some less—and many lose all. So, any new product or other departure must yield an excess, a monopoly return, over some period to cover costs and finally achieve the ideal of competition. There is no difference in principle and no clear distinction in practice between profit and monopoly gain. Profit is legitimate or justified monopoly revenue, and monopoly gain is that which is "too" large or lasts too long (or which rests on some "unfair" competitive practice).

New products or other departures as a class must also yield enough temporary monopoly revenue to make such activities attractive. Note that I do not say that the successes must pay for the failures, not to mention yielding an excess as a "reward for risk-taking." As I stated earlier, even the former does not seem to be the case. The pecuniary incentive required to keep the economy progressive depends on the psychology of the people, in relation to their abilities to judge situations, to predict and to manage. One can be sure only that there must be an *expectation* of some clear gain or men of good economic sense will not venture. Note also that I say nothing about the "probability" of gain or loss. Though I may be accused of ignorance or hobby-riding, I must say I find much nonsense—sheer irrelevance—in writings applying probability theory to profit or to economic events or human choices in general. This comes out in a statement I saw not long ago, that uncertainty is a maximum when the chances are even, for and against an outcome. But it is surely evident that the effective uncertainty is zero when the probability is known, no matter how large or small it may be, and increases as the probability itself is less determinate. In relation to any known probability, reduction to certainty is a question merely of the cost and practical feasibility of organization to group cases. Probability may be known by a priori calculation or from experience statistics. But mathematical probability is applicable only to the extent that one can form a homogeneous class of cases—homogeneous enough and large enough to yield any given degree of reliability. That is always a matter of judgment; and human judgments form the most interesting and important class, or class of classes, for probability distribution. There is evidently no science that will predict human predictions, and action on predictions, notably better than the common-sense projection of past and present into the future.

Briefly, then, as to the bearing on policy. The historical changes described by Dr. Robertson and Professor Cole, also (and unheard-of levels of profit taxation might be added), greatly increase the uncertainty-risk (distinguished from chance-risk) which a responsible producer faces, along with the period over which it must be borne. They tend, further, to increase the loss to be feared more than the gain which is hoped for, as a condition of undertaking the risk. In other words, economic progress increases the magnitude of the luck element (again not mathematical chance) in comparison with possible fore-

sight in productive operations; and that is still true if these represent no new departure but follow established lines. Apparent profit—always technically monopoly revenue—and losses will undoubtedly increase, to an extent which cannot be measured. Thus the distribution of income in the economy will seem more "unjust" as the notion is popularly understood. For men typically compare themselves with others who are, or seem to be, better off rather than with those lower in the scale, short of calamitous misfortune, and they make comparisons at a moment without trying to consider the long run. The relation of distributive justice to the luck factor presents a problem for which no definite solution can be expected. The logical view would be that if men take chances voluntarily and deliberately, they deserve whatever they get; but society cannot base policy on that theory alone.

On the other side, the uncertainty-risk faced by society in arbitrarily interfering with the free-market distribution of incomes is increased fully as much as the risk taken by entrepreneurs (and other parties, for the entrepreneur function cannot be at all completely specialized). Thus the dangers of action rise along with the need. And uncertainty about facts, great as it is, is at least matched by vagueness, disagreement and especially lack of objectivity and partisan dogmatism with respect to the ideals which society ought to strive to realize through directing the course of progress. The one positive suggestion I can make briefly is in line with the thinking of Adam Smith. If society itself (the government) would stop fostering monopoly and restrictive practices and prevent admittedly "unfair" action, the problem would be vastly reduced in scope and severity, one may even say well advanced toward solution—such solution as the facts of life make possible.

Andreas Papandreou: The common theme of the two papers probably lies in the view that theorists have failed to develop the analytical apparatus which is best suited for prediction and policy making in mid-century America. This view is not new, but the specific tasks set for the theorist by the two speakers do deserve his attention.

Mr. Robertson's key proposition can be summarized as follows: It is generally agreed that our economy is predominantly oligopolistic. According to the precepts of our orthodox price and allocation theory, the performance of our economy should be highly disappointing. Instead, it is possible to assert that it is rather satisfactory. Something must have gone wrong with our theoretical constructs. The specifically relevant issues are three: the theory of oligopolistic behavior, the concept of industry, and, finally, appropriate public policy.

I wholeheartedly agree with Mr. Robertson that our theory of oligopolistic behavior is inadequate. This may be due in part to the fact that the apparatus of the theory of games has not been fully exploited in this direction, especially so far as the derivation of empirically meaningful propositions is concerned. The allocative effects of oligopoly, within the context of neoclassical doctrine, are supposed to be similar to those obtaining under collusion. Whether we choose to argue that firms in oligopolistic markets collude in order to maximize profits jointly or that they follow strategies of independent profit maximization on the basis of conjectures concerning other firms' reactions to their own

actions, we end up with a behavior pattern whose results from the point of view of allocation are highly undesirable. So it has come to pass that in economic theory, oligopoly and collusion are terms often used interchangeably. I submit that this emphasis on the co-operative behavior pattern is highly exaggerated. I should like to argue that not seldom oligopolists choose an aggressive or a truly independent (single play) strategy. To be sure we are not possessed of a theory which permits us to predict under what circumstances the aggressive or the independent rather than the co-operative pattern will be chosen. It may be hypothesized that when the industry is young or when the time horizon of the firms is short, an independent, single play strategy will be adopted. It may also be hypothesized that the co-operative pattern, if it prevails, will be restricted primarily to the price dimension—that product competition will be more active than price competition. Such hypotheses, however, need be tied together by an overriding theory which is not inconsistent with the main body of economic thinking. In short, such a theory must tell us under what circumstances oligopolists choose to "fix the game" rather than "kill the rival" or "go it alone"; and it must do this without challenging unduly the main structure of our discipline.

Much of our trouble, of course, arises in our attempts to apply the theory to concrete empirical situations. Mr. Robertson is justifiably concerned with the problem of identifying the members of the industry or the group which is relevant for the tasks at hand. I share his feeling that the concept of industry customarily employed by economists is quite inadequate. A somewhat more relevant concept, it seems to me, may be constructed as follows: We may start out by forming the market group of a firm on the basis of cross-elasticities. Next, we form the industry group to which it belongs, employing for its identification some appropriate technological criteria. The intersection of these two sets or groups—the market group and the industry group—yields, I believe, a more appropriate collection of firms for the study of firm behavior than either the industry or the market group. If the number of firms in this intersection or subgroup is small, then firms within it will behave vis-à-vis one another as oligopolists are supposed to behave; i.e., they will probably take into account one another's reactions to their own actions. This subgroup, however, does not include all the firms which sell substitutes for the product of the firms which belong to it. I submit that the competition between two firms which belong to two different oligopolistic subgroups but to the same market group is much more active. It is much more active because the firms in question probably do not take account of one another's reaction to their own actions. This formulation provides a frame of reference for Mr. Robertson's interesting argument concerning interindustry competition.

Finally, there is the question of public policy. Here again I should like to take a somewhat unorthodox position. I suspect that our antitrust program can best be understood in the light of a welfare system built around the concept of "competitive pressure" rather than that of allocative efficiency. Much of what Mr. Robertson said does not fit well our welfare economics; but it would make good sense in a welfare system revolving around competitive pressure. The same is true for the propositions which flow out of the doctrine

of workable competition. In summary, I am in full agreement with Mr. Robertson concerning the need for a thorough reconsideration of both the analytical and the policy aspects of firm behavior in oligopolistic markets. I am not so sure that I agree with the implication of his argument that the dissonance between theory and reality is of recent vintage; nor do I agree with him that a satisfactory taxonomy of product categories will resolve most of our problems in this area of discourse. Much more than this must be done.

Mr. Cole's key proposition consists of the statement that entrepreneurs or business leaders have become more sophisticated. This increase in sophistication involves the conception of goals as well as the conception of means-ends relations. According to Mr. Cole, the behavior of business firms today can be understood best in terms of the viability theme rather than that of profit maximization. This suggestion is not new. Though there is much in its favor, it is subject to a rather crucial limitation. In its present form it does not lead to any operationally meaningful propositions about the behavior of economic variables. Unless and until it is made to do so, it will not displace the simple notion of profit maximization. It is interesting to observe that all attempts to increase the sophistication of the theoretical formulations concerning firms' goals have led to a drastic reduction in the empirical potency of the theory. The most general and safe statement that can be made about firms' goals is that they maximize expected utility. Unless the function to be maximized is made specific, the statement can never be contradicted by any type of observed behavior. Thus it becomes the most general and at the same time the most meaningless possible statement about firm behavior.

Mr. Cole's argument concerning means-ends relations stresses the increased importance of human relations in business. I submit that this development is a natural consequence of the extension of the scientific method—so intimately related to the growth of capitalism—to the sphere of interpersonal relations and group processes. Both organization theory and small group theory constitute relatively recent contributions to our stock of knowledge. It is not at all surprising that businessmen are willing to employ this knowledge concerning the techniques of human management side by side with technological knowledge. What is somewhat surprising, and really calls for an explanation, is the alleged fact that the American businessman is more rational or more sophisticated than his European counterpart. A hypothesis aiming to account for this difference will command attention only insofar as it takes due account of both the subjective-cultural and the objective differences between the American and the European societies.

Finally, I suspect that Mr. Cole has neglected a rather important development which may well account in part for the increased sophistication in business behavior, especially the emphasis on human relations. The structure of power over the modern business firm is typically different from that of the nineteenth century. Not the least important development in this connection is the growth of the power of labor unions.

# FACTOR MARKETS VERSUS PRODUCT MARKETS

## Is the American Economy More Competitive in the Long Run Than in the Short Run?

## COMPETITION: DIRECT AND DEVIOUS[1]

*By* G. Warren Nutter
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It cannot be said that price theory has marked time over the last half-century. Competition and monopoly—the two parts into which the relatively simple Marshallian system is divided—have been dissected into many pieces: competition is now pure and impure, perfect and imperfect; monopoly grades into duopoly, oligopoly, and even polypoly, each in turn having various degrees of purity and perfection; and overlapping all these is the amorphous region of monopolistic competition. While the boundaries in Marshallian theory are essentially set by differences in behavior, those in current theory are set by a multitude of criteria. Thus some distinctions are based on degrees of knowledge, mobility, and the like; some on number of rival firms; some on similarity of products; and some on mixtures of these. Each little piece of theory has an appearance of order and even elegance, but the whole does not; boundaries interlace or fail to meet. Nevertheless, whatever the theorist may think about its lack of order, he must grant that the structure covers, in some form or other, virtually every empirical case he is likely to encounter. He has reason to expect that his ability to handle concrete problems has been vastly improved.

He is bound, however, to be disillusioned. Once he has identified an actual situation as belonging in one or another of these theoretical areas, he typically finds that he can say very little about the kind of behavior to expect from it. The oligopolist, he discovers, may behave in countless different ways, depending on countless different circumstances; so may all the others, except the rare pure competitor or the much rarer pure monopolist. Current theory contributes this: it sets forth with precision all the reasons why we cannot say anything precise about the behavior of prices.

[1] Since this paper is cast as a set of reflections rather than as a technical discussion, and since the Association wishes to economize on costs of publishing its *Proceedings*, I am dispensing with footnote references to the literature dealing with various points raised. This does not, of course, mean that my thoughts are in any sense original—except those that all other economists will wish to disclaim. I hope the failure to identify flagrant instances of plagiarism will be excused.

We are led to wonder whether sophistication has given us much to compensate for the manageable simplicity that it has taken away. We are also led to wonder whether the often lamented obsolescence of theory is not due as much to theoretical developments as to economic change. We must certainly be struck by the fact that, when we are faced with concrete problems, we place our trust overwhelmingly in the simple and familiar tools of supply and demand, with results that are generally quite satisfactory for most purposes.

This is not to argue that we should go back to Marshall's *Principles* and stop there. Remarkable as his contributions are, they do not include an adequate guide for applying theory to concrete situations. And the core of his theory deals primarily with what he considered to be general cases; it leaves out many problems that economists cannot escape.

Nor is this to argue that theorizing since Marshall has been barren. It is the shift in orientation—in the general tone of theory, if you will—whose worth I am questioning. We have been gradually losing interest in the orderly, the regular, and the general aspects of economic relationships, so well summarized in Marshall's use of the word "normal"; we have instead become preoccupied with the disorderly, the irregular, and the specific. This is perhaps explainable in part as a reaction against the bent toward highly abstract models, which arose quite early on the neoclassical scene. Because their designers were preoccupied with getting neatness and perfection, these models ended up by forcing excessive order into the economic system. They not only stripped the flesh from the bones; they also tidied up the somewhat misshapen skeleton found beneath. Since the rearranged bones bore little resemblance to the original body, a large group of economists was ready to conclude that, if the ideal is supposed to represent order, the real economy must be chaos. Marshall's world of competition gradually changed in their eyes to a world of oligopolies, which is a euphemism for "anything can happen." Although this view is not dominant, it is certainly widespread. I believe that it is wrong and that faulty theory is as much cause as effect.

Among economists, few cries are more frequent and more short-lived than this one, that something must be done about the state of price theory. I do not propose to bore you with a prolonged harangue on this point, particularly since I should have few constructive remarks to make. I raise the issue merely to introduce, or possibly to excuse, my main remarks, which deal with the problem of defining, describing, and identifying competition. The link between that discussion and the introduction will, I hope, be evident. Put briefly it is this: the usefulness of our theoretical apparatus will be greatly improved if theoretical

cases are set up with a view to distinguishing types of behavior; the first distinction to focus on is that between competitive and noncompetitive behavior; and the first task is to outline the nature and preconditions of competitive behavior, with a sharp eye on the world we live in.

I will not pretend to offer a definitive contribution along these lines. My remarks are intended merely to indicate the general directions that inquiry might take. Moreover, I want to warn at the start that what I have to say does not bear directly on the question of what consequences are to be expected from competitive behavior. There may or may not tend to be equal-productivity allocation of resources, general elimination of extraordinary profits, and so on. Whether there will be depends on conditions that lie outside the realm of competitive behavior in itself. I am going to look at short-run equilibriums; to the extent that they may also be long-run equilibriums, they are so only in the sense that all desired and possible adjustments have been made under appropriate *ceteris paribus* conditions. No other implications are intended.

Anyone who attempts to describe competition takes on a heavy burden; for competition means fundamentally a particular kind of market behavior. If a market is to be competitive, all components of it must fall in line; sellers and buyers must behave in the correct manner, both individually and collectively. The elements of competition can, however, be treated additively. Competitive selling of productive factors, plus competitive buying of them, plus competitive selling of the product, plus competitive buying of it, yields a competitive market. Of course, analysis must proceed along hazier lines because the firm is a unit buying and selling both factors and products. In this paper I shall deal with the firm as a seller, focusing on its activity as an individual unit, not as a member of a group. That is, I shall no more than mention the problem of collusive behavior. My main object is to clarify the nature of competitive selling by individual economic units.

### *The Competitive Firm*

A firm behaves competitively if it produces an output at which marginal cost equals price. Since this is a statement about equilibrium behavior, it is more correct to say that the firm persistently tends to produce such an output. Having said this, we are immediately confronted with the troublesome question of time, to which no simple answers can be found. The familiar distinction between short and long runs is not enough, if we stick to Marshallian meanings; for we must be concerned with the speed and regularity with which equilibriums are established as well as with their nature. Competitive responses of a firm to changing conditions may be prompt in some cases and delayed in

others; or they may be always prompt; or always delayed. The timing of behavior must be taken into account if a theory is to be constructed that is relevant to empirical problems.

The most difficult task is perhaps to define the conditions underlying competitive behavior. They will be merely exposed at this point and examined later. If we grant that firms are in general guided by pecuniary motives, it follows that a firm will behave competitively if it has nothing to gain by setting an output at which marginal cost differs from price. It will have nothing to gain if the demand[2] facing the firm, considered for a relevantly long adjustment period, is completely elastic (i.e., very elastic) over the range of output at which marginal cost approaches price. It may also have nothing to gain for other reasons; for instance, under some conditions a firm faced with less elastic demand may maximize the present value of its stream of profits by behaving competitively. The speed and regularity of competitive behavior will depend on the persistence and strength with which these basic conditions operate.

The truly formidable job is to identify competitive situations in an empirically relevant way. The most direct route is to judge by behavior itself: measure the relation between marginal cost and price, if possible; look for evidence of behavior implied by supply and demand analysis; and so on. Another fairly direct route is to measure elasticity of demand, if possible. But neither of these routes helps to solve the fundamental problem, which is to construct a theory based on preconditions likely to be found, in exact or approximate form, in the world about us. These direct tests of behavior may be applied once probable cases have been isolated; they are much too cumbersome to use for isolating the cases. Physiology should not be made to do the work of comparative anatomy.

Nor are the assumptions of current competitive theory adequate for this purpose, for they are much too restrictive. They are in the main sufficient assumptions, but by no means necessary. Occam's razor has been used with both liberality and restraint; the number of conditions has in a sense been minimized but many are unnecessarily restrictive or even incompatible with the theory. The drive for simplicity and elegance, while commendable, should not be allowed to push aside operational content.

However, we may start with current theory stripped of certain incompatibilities.[3] According to current theory, the firm behaves competitively because it is faced, in both short and long runs, with a de-

[2] Throughout this paper unless noted otherwise, the *ceteris paribus* conditions underlying demand are those of Marshall.

[3] The primary assumptions to be left out are those designed to eliminate friction. Without friction, there is no equilibrium; without equilibrium, no theory.

mand that is completely elastic over the entire range of possible outputs; and it seeks to maximize profits. Demand is completely elastic because all customers are completely indifferent whether they buy the product of this firm or of any of its competitors; and there are a large number of accessible competitors. Customers are indifferent because all products are physically indistinguishable; competitors are firms producing this homogeneous commodity. Here is a simple case of prompt and continuous competition, reasonably easy to identify; it characterizes large parts of agriculture, some mining, and some manufacturing. At this point most textbooks and many theoretical papers stop, as if the area of competition had been delimited. This is far from the case, however.

It seems clear that competitive behavior can result if demand is completely elastic for only a portion of possible outputs. To put the matter loosely, demand needs to be completely elastic (i.e., very elastic) only over that range at which marginal cost approaches price. This is to say that if the firm varies output over this range, it will not affect price.[4] We are immediately confronted with a much broader meaning of consumer indifference, leading to changes in the meaning of competing firms. Homogeneity becomes homogeneity at the margin: a relevantly large number of customers is indifferent to a relevantly large number of alternative products. It is natural to expect that these products will be physically similar, but they need not be indistinguishable. (The shaky basis of a product differentiation is sometimes unconsciously laid bare in advertising slogans; an intriguing example runs: "No other brand gives you more quality at lower cost.") Moreover, they need not have identical prices. In a static sense, it is required only that prices have constant ratios to each other, or constant differences between each other, or both. There must be many competing firms, but not as many as if demand facing each were to be completely elastic over all outputs. There needs to be only an active minority of cagey customers, not an entire population.

In order for such conditions to evoke competitive behavior from firms, they must be reasonably stable. In particular, there must be some limit to the power of advertising and other selling expenditures in raising demand or in decreasing its elasticity. At some point additional selling expenditures must raise costs without relevantly affecting demand, account being taken of the responsive selling activities of competing firms; and, when this point is reached, demand must be completely (very) elastic over the relevant range of output. The same

[4] For those who understand better through pictures, the graph of the described demand is a hill with a plateau extending over at least part of the area at which marginal cost moves up toward price.

must hold for attempts to "differentiate" the product by other means, such as novel packaging.

We have been carried into the area usually claimed by monopolistic competition. The argument is not that the entire area is competition in disguise; it is, rather, that many parts of it are. To put the matter negatively and more obviously, product differentiation, taken in its broadest sense, is not proof in itself that prompt and continuous competition is absent.

We may now move to the even more elusive cases, in which competition is delayed and discontinuous. Such cases may occur, in the first place, if demand facing a firm is not completely elastic in short runs but becomes so after some adjustment period. We cannot adequately analyze these cases without clarifying the meaning of profit maximization, a task that can be only superficially met in this paper. But a brief digression is in order.

For the competitive situations already discussed, it makes little difference how we define profit maximization; the individual firm maximizes the present value of its stream of profits by maximizing the current rate, for the course of future events is beyond its control. However, once the "future" elasticity and position of demand come to depend on prices set "now," the firm must face the problem of what it is trying to maximize. Without attempting a precise definition, I shall assume that the firm tries to maximize the present value of its stream of profits, discounted at a rate sufficiently high to take account of the weight it attaches to uncertainty about the future.

Starting at this point, we may distinguish two factors that cause elasticity of demand to be lower in short than in long runs. The first is the slowness in response of customers; the second, of competitors, both actual and latent. There is little reason to expect that the firm will try to exploit sluggishness of customers. To do so would require an elaborate policy of now raising, now lowering prices—a policy not likely to be tried on the basis of knowledge available to the firm. At least, I do not know any outstanding cases of such behavior.[5] Hence we may safely conclude that a firm will be guided by long-run elasticity as far as it depends on consumer reactions.

This is not so true for elasticity, as it depends on reactions of competitors. If short- and long-run demands differ for this reason, it may

[5] One is tempted to argue that the use of periodic "bargain" sales in retail trades is such a case. But this practice does not amount to alternate gaining and losing of the same clientele; it amounts rather to the splitting of it into two groups, those attaching low and high costs to shopping. The lower price offered the former in special sales does not spoil the market represented by the latter. And without this practice the bargain hunters would take all their custom to low-service stores. We have here a case of price (and cost) discrimination in a competitive setting.

well pay the firm to operate off its longer run demand; the most it will do is to speed up expansion of existing rivals and entry of new ones; and increased profits "now" may more than compensate for decreased profits "later." Hence complete elasticity of demand over longer runs, but not over shorter ones, may imply delayed and irregular competitive behavior.

There are many industries that fit this description, usually classified within the areas of monopolistic competition and oligopoly. They belong to the broad category of "potential competition," which should be understood to imply irregular competitive behavior, with sporadic divergences away from it whenever the basic economic conditions facing an industry change substantially.

Finally, there is a possibility of competitive behavior even if both short- and long-run demands are significantly less than completely elastic. I shall outline one conceivable case. Suppose a firm has a product that cannot, over a relevantly long period, be fully duplicated, even "at the margin"; for instance, it may have a patent or internal economies of scale that are substantial relative to the extent of the market. If the firm is earning extraordinary profits, it must nevertheless expect that production of rival commodities will expand and that portions of its market will be gradually attracted away. The higher its price and rate of profits, the more rapid the expansion is likely to be; hence it may pay the firm to forego some of its current profits in order to increase those in the future. The firm may actually behave competitively during part of the adjustment period. We must beware, however, of attributing much importance to such cases, since they are likely to be rare.

### *The Role of Competition in the American Economy*

As put at the beginning of this paper, the main objective of my remarks is to indicate some changes in the approach to price theory that might improve its usefulness. That objective has now been met about as well as I can meet it in a brief paper. The sensible thing for me to do is to stop while I am on reasonably firm ground. Instead of doing this, I shall plunge boldly and incautiously ahead to give my impressions of the role that competition actually plays in the American economy.

We need pause only a moment with the industries that fit into the conventional mold of competition: large segments of agriculture, some portions of mining, and scattered industries in manufacturing. These industries account for perhaps 10 per cent of national income. Competitive behavior of firms is continuous and prompt.

We move next to those industries with a large number of firms producing products that are differentiated but "marginally" homogeneous.

These cases range from services, trade, and construction, where competitive behavior of firms is generally continuous and prompt, to large segments of manufacturing, where it is generally irregular and delayed. The first group accounts for possibly 35 per cent of national income; the second, for another 10 per cent or so.

Finally, there are industries we classify as oligopolies, centered primarily in manufacturing and transportation; as a group, oligopolistic industries account for perhaps as much as 35 per cent of national income. My guess would be that those subject to strong and constant pressure of potential competition account for about 15 per cent, leaving around 20 per cent accounted for by noncompetitive oligopolies.

From these rough estimates, it would seem that 45 per cent of national income is produced under continuously competitive conditions and an additional 25 per cent under irregularly competitive conditions.

To get an impression of the role of competition at any particular time, this picture must be modified. As competition is disappearing in some industries, it is reappearing in others; the mass of behavior tends to remain stable, with some industries moving in as others move out. When within, each industry tends to move toward long-run competitive equilibrium; but that movement may be interrupted before it is completed.

Up to this point I have ignored collusion, not because it is insignificant, but because its significance depends partly on the underlying behavior of firms. In those industries that I have called competitive, collusion will usually be no more than temporarily effective, unless it is legally enforced. Basic forces are constantly pressing to break down all barriers to competition, of which collusion is only one. The breeding ground for effective, persistent collusion is the noncompetitive sector of the economy.

There is, of course, a sizable population of noncompetitive industries, protected by barriers of one sort or another, such as patents and internal economies of scale. This population tends also to be stable; but some members are always being killed and others are always being born. Death may mean change to competitive status or it may mean actual extinction. In an opposite sense, the same applies to birth. These noncompetitive industries probably account for from 20 to 25 per cent of national income.

When the economy is looked at from this "organic" point of view, it makes sense to say that there is more competition in the "long" than in the "short" run. More important, it makes sense to say that competition is the normal condition in our economy. Theory should be brought back into touch with the world we live in by recasting monopolistic elements in their proper role: as a special, not the general, case.

# MONOPOLY AND RESOURCE ALLOCATION[1]

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One of the first things we learn when we begin to study price theory is that the main effects of monopoly are to misallocate resources, to reduce aggregate welfare, and to redistribute income in favor of monopolists. In the light of this fact, it is a little curious that our empirical efforts at studying monopoly have so largely concentrated on other things. We have studied particular industries and have come up with a formidable list of monopolistic practices: identical pricing, price leadership, market sharing, patent suppression, basing points, and so on. And we have also studied the whole economy, using the concentration of production in the hands of a small number of firms as the measure of monopoly. On this basis we have obtained the impression that some 20 or 30 or 40 per cent of our economy is effectively monopolized.

In this paper I propose to look at the American economy, and in particular at American manufacturing industry, and try to get some quantitative notion of the allocative and welfare effects of monopoly. It should be clear from the outset that this is not the kind of job one can do with great precision. The best we can hope for is to get a feeling for the general orders of magnitude that are involved.

I take it as an operating hypothesis that, in the long run, resources can be allocated among our manufacturing industries in such a way as to yield roughly constant returns. That is, long-run average costs are close to constant in the relevant range, for both the firm and the industry. This hypothesis gives us the wedge we need to get something from the data. For as is well known, the malallocative effects of monopoly stem from the difference between marginal cost and price, and marginal costs are at first glance terribly difficult to pin down empirically for a wide range of firms and industries. But once we are ready to proceed on the basis of constant average costs, we can utilize the fact that under such circumstances marginal and average costs are the same, and we can easily get some idea of average costs.

But that does not solve all the problems, for cost and profit to the economist are not the same things as cost and profit to the accountant, and the accountants make our data. To move into this question, I

[1] I am indebted to my colleagues D. Gale Johnson, H. Gregg Lewis, and George S. Tolley for stimulating discussions and comments during the preparation of this paper. They are, of course, not responsible for errors that may remain.

should like to conjure up an idealized picture of an economy in equilibrium. In this picture all firms are operating on their long-run cost curves, the cost curves are so defined as to yield each firm an equal return on its invested capital, and markets are cleared. I think it is fair to say that this is a picture of optimal resource allocation. Now, we never see this idyllic picture in the real world, but if long-run costs are in fact close to constant and markets are cleared, we can pick out the places where resources are misallocated by looking at the rates of return on capital. Those industries which are returning higher than average rates have too few resources; and those yielding lower than average rates have too many resources. To get an idea of how big a shift of resources it would take to equalize profit rates in all industries, we have to know something about the elasticities of demand for the goods in question. In Figure 1, I illustrate a hypothetical case. The industry in question is earning 20

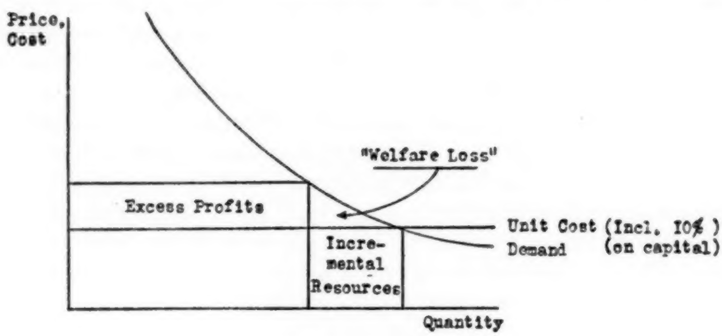


FIGURE 1

per cent on a capital of 10 million dollars, while the average return to capital is only 10 per cent. We therefore build a 10 per cent return into the cost curve, which leaves the industry with 1 million in excess profits. If the elasticity of demand for the industry's product is unity, it will take a shift of 1 million in resources in order to expand supply enough to wipe out the excess profits.

The above argument gives a general picture of what I have done empirically. The first empirical job was to find a period which met two conditions. First, it had to be reasonably close to a long-run equilibrium period; that is, no violent shifts in demand or economic structure were to be in process. And second, it had to be a period for which accounting values of capital could be supposed to be pretty close to actual values. In particular, because of the disastrous effect of inflation and deflation on book values of capital, it had to be a period of fairly stable prices, which in turn had been preceded by a period of stable prices.

It seemed to me that the late twenties came as close as one could hope to meeting both these requirements.

The late twenties had an additional advantage for me—because my choice of this period enabled me to use Professor Ralph C. Epstein's excellent study, ***Industrial Profits in the United States*** (National Bureau of Economic Research, 1934), as a source of data. Professor Epstein there gives, for the years 1924-28, the rates of total profit to total capital for seventy-three manufacturing industries, with total capital defined as book capital plus bonded indebtedness and total profit defined as book profit plus interest on the indebtedness. To get rid of factors producing short-period variations in these rates of return, I average the rates, for each industry, for the five-year period. The results are given in column 1 of Table 1. The differences among these profit rates, as between industries, give a broad indication of the extent of resource malallocation in American manufacturing in the late twenties.

Column 2 presents the amount by which the profits in each industry diverged from what that industry would have obtained if it had gotten the average rate of profit for all manufacturing industry. In column 3, these excesses and shortages of profit are expressed as a per cent of sales in the industry. By analogy with Figure 1, you can see that this column really tells by what percentage prices in each industry were "too high" or "too low" when compared with those that would generate an optimal resource allocation.

Now suppose we ask how much reallocation of resources it would take to eliminate the observed divergences in profit rates. This depends, as you can see in Figure 1, on the demand elasticities confronting the industries in question. How high are these elasticities? It seems to me that one need only look at the list of industries in Table 1 in order to get the feeling that the elasticities in question are probably quite low. The presumption of low elasticity is further strengthened by the fact that what we envisage is not the substitution of one industry's product against all other products, but rather the substitution of one great aggregate of products (those yielding high rates of return) for another aggregate (those yielding low rates of return). In the light of these considerations, I think an elasticity of unity is about as high as one can reasonably allow for, though a somewhat higher elasticity would not seriously affect the general tenor of my results.

Returning again to Figure 1, we can see that once the assumption of unit elasticity is made the amount of excess profit measures the amount of resources that must be called into an industry in order to bring its profit rate into line. When I say resources here I mean the services of labor and capital plus the materials bought by the industry from other industries. In many ways it seems preferable to define resources as

## TABLE 1

| Industry | (1) Rate of Profit on Capital (1924–28) | (2) Amount by Which Profits Diverged from "Average" (Millions) | (3) Column (2) as Per Cent of Sales | (4) Welfare Cost of Divergence in Column (2) (Millions) |
|---|---|---|---|---|
| Bakery products | 17.5% | $17 | 5.3% | $.452 |
| Flour | 11.9 | 1 | 0.4 | .002 |
| Confectionery | 17.0 | 7 | 6.1 | .215 |
| Package foods | 17.9 | 7 | 3.3 | .116 |
| Dairying | 11.8 | 3 | 0.7 | .010 |
| Canned goods | 12.4 | 1 | 0.6 | .003 |
| Meat packing | 4.4 | −69 | −1.7 | .596 |
| Beverages | 5.8 | −2 | −4.0 | .080 |
| Tobacco | 14.1 | 27 | 0.3 | .373 |
| Miscellaneous foods | 8.1 | −13 | −2.4 | .164 |
| Cotton spinning | 10.0 | −0 | 0 | 0 |
| Cotton converting | 8.0 | −1 | −0.6 | .008 |
| Cotton weaving | 4.7 | −15 | −5.5 | .415 |
| Weaving woolens | 2.6 | −16 | −9.5 | .762 |
| Silk weaving | 7.9 | −3 | −2.3 | .035 |
| Carpets | 9.8 | −1 | −1.3 | .006 |
| Men's clothing | 11.4 | 1 | 0.5 | .002 |
| Knit goods | 12.9 | 3 | 1.9 | .028 |
| Miscellaneous clothing | 13.1 | 1 | 1.1 | .006 |
| Miscellaneous textiles | 9.2 | −2 | −0.9 | .008 |
| Boots and shoes | 15.8 | 9 | 3.8 | .172 |
| Miscellaneous leather products | 7.7 | −3 | −2.1 | .032 |
| Rubber | 7.6 | −23 | −2.5 | .283 |
| Lumber manufacturing | 7.8 | −6 | −3.9 | .118 |
| Planing mills | 13.1 | 1 | 3.2 | .016 |
| Millwork | 7.3 | −1 | −2.9 | .014 |
| Furniture | 13.4 | 2 | 2.2 | .022 |
| Miscellaneous lumber | 12.9 | 4 | 1.7 | .034 |
| Blank paper | 6.6 | −17 | −6.2 | .524 |
| Cardboard boxes | 13.6 | 2 | 3.1 | .031 |
| Stationery | 7.5 | −2 | −3.0 | .030 |
| Miscellaneous paper | 9.3 | −1 | −1.1 | .005 |
| Newspapers | 20.1 | 37 | 8.5 | 1.570 |
| Books and music | 14.6 | 2 | 4.3 | .042 |
| Miscellaneous printing and publishing | 18.6 | 1 | 5.6 | .028 |
| Crude chemicals | 10.2 | −0 | 0 | 0 |
| Paints | 14.6 | 5 | 3.3 | .082 |
| Petroleum refining | 8.4 | −114 | −3.6 | 2.032 |
| Proprietary preparations | 20.9 | 25 | 11.7 | 1.460 |
| Toilet preparations | 30.4 | 3 | 15.0 | .225 |
| Cleaning preparations | 20.8 | 15 | 5.5 | .413 |
| Miscellaneous chemicals | 15.6 | 45 | 8.8 | .197 |
| Ceramics | 10.8 | 1 | 1.0 | .005 |
| Glass | 13.5 | 4 | 2.6 | .052 |
| Portland cement | 14.3 | 10 | 8.4 | .420 |
| Miscellaneous clay and stone | 17.6 | 14 | 8.0 | .560 |
| Castings and forgings | 5.6 | −234 | −7.7 | 8.994 |
| Sheet metal | 10.5 | 0 | 0 | 0 |
| Wire and nails | 11.6 | 1 | 1.2 | .006 |
| Heating machinery | 13.3 | 3 | 1.6 | .024 |
| Electrical machinery | 15.7 | 48 | 5.3 | 1.281 |
| Textile machinery | 13.6 | 3 | 6.1 | .092 |
| Printing machinery | 9.7 | −0 | 0 | 0 |
| Road machinery | 17.3 | 10 | 6.8 | .374 |
| Engines | 13.7 | 2 | 5.9 | .059 |
| Mining machinery | 11.0 | 1 | 0.7 | .004 |
| Factory machinery | 11.7 | 33 | 3.0 | .045 |
| Office machinery | 16.1 | 7 | 5.6 | .194 |
| Railway equipment | 6.0 | −24 | −9.6 | 1.148 |
| Motor vehicles | 18.5 | 161 | 4.4 | 3.878 |
| Firearms | 12.9 | 1 | 2.0 | .010 |
| Hardware | 12.8 | 8 | 2.3 | .092 |
| Tools | 11.6 | 1 | 1.1 | .006 |
| Bolts and nuts | 15.4 | 1 | 3.1 | .016 |
| Miscellaneous machinery | 12.6 | 3 | 2.2 | .032 |
| Nonferrous metals | 11.9 | 15 | 1.4 | .106 |
| Jewelry | 10.6 | 0 | 0 | 0 |
| Miscellaneous metals | 12.5 | 14 | 2.0 | .140 |
| Scientific instruments | 21.2 | 20 | 11.6 | 1.163 |
| Toys | 15.0 | 1 | 3.2 | .016 |
| Pianos | 9.9 | −0 | 0 | 0 |
| Miscellaneous special manufacturing | 12.0 | 4 | 1.4 | .027 |
| Job printing | 13.8 | 4 | 2.2 | .044 |

Col. (1)—from Ralph C. Epstein, ***Industrial Profits in the United States*** (N.B.E.R., 1934), Tables 43*D* through 53*D*. Entries in column (1) are the arithmetic means of the annual entries in the source tables.

Col. (2)—divergences in the profit rates given in column (1) from their mean (10.4) are here applied to the 1928 volume of capital in each industry. Total capital is the sum of book capital (Epstein, Appendix Table 6*C*) plus bonded debt (Epstein, Appendix Table 6*D*).

Col. (3)—1928 figures were used for sales (Epstein, Appendix Table 6*A*).

Col. (4)—measures the amount by which consumer "welfare" fell short of the level it would have attained if resources had been so allocated as to give each industry an equal return on capital. It assumes that the elasticity of demand for the products of each industry is unity and approximates the area designated as "welfare loss" in Figure 1.

simply the services of labor and capital. This could be done by applying to the value added in the industry the percentage of excess profits to sales. The trouble here is that adding to the output of industry X calls resources not only into that industry but also into the industries that supply it. And by the time we take all the increments in value added of all these supplying industries that would be generated by the initial increase in output of industry X, we come pretty close to the incremental value of sales in industry X. Of course, the movement to an optimal resource allocation entails some industries expanding their output, like X, and others, say Y, contracting their output. If we really traced through the increments to value added which are required in their supplying industries, say Z, we would often find that there was some cancellation of the required changes in the output of Z. Hence by using sales rather than value added as our measure of resource transfer, we rather overstate the necessary movement.

Keeping this in mind, let us return to the data. If we add up all the pluses and all the minuses in column 2, we find that to obtain equilibrium we would have to transfer about 550 million dollars in resources from low-profit to high-profit industries. But this is not the end. Those of you who are familiar with Epstein's study are aware that it is based on a sample of 2,046 corporations, which account for some 45 per cent of the sales and capital in manufacturing industry. Pending a discussion of possible biases in the sample a little later, we can proceed to blow up our 550 million figure to cover total manufacturing. The result is 1.2 billion. Hence we tentatively conclude that the misallocations of resources which existed in United States manufacturing in the period 1924-28 could have been eliminated by a net transfer of roughly 4 per cent of the resources in manufacturing industry, or 1½ per cent of the total resources of the economy.

Now let us suppose that somehow we effected these desired resource transfers. By how much would people be better off? This general question was answered in 1938 for an analogous problem by Harold Hotelling.[2] His general formula would be strictly applicable here if all our

[2] Harold Hotelling, "The General Welfare in Relation to Problems of Taxation and of Railway and Utility Rates," *Econometrica*, July, 1938, pp. 242-269. The applicability of Hotelling's proof to the present problem can be seen by referring to p. 252 ff. He there indicates that he hypothecates a transformation locus which is a hyperplane. This is given us by our assumption of constant costs. He then inquires what will be the loss in moving from a point $Q$ on the hyperplane, at which the marginal conditions of competitive equilibrium are met, to a point $Q'$ at which these conditions of competitive equilibrium are not met. At $Q'$ a nonoptimal set of prices $P'$ prevails. These are, in our example, actual prices, while the equilibrium price-vector $P$ is given by costs, defined to include normal profits. Hotelling's expression for the welfare loss in shifting from $Q$ to $Q'$ is $\frac{1}{2}\Sigma dp_i dq_i$ where $p_i$ and $q_i$ are the price and quantity of the $i$-th commodity. We obtain this by defining our units so that the cost of each commodity is $1.00. The equilibrium quantity of each commodity under the assumption of unit elasticities is then equal to the value of sales of that commodity. If we call $r_i$ the percentage divergence of actual price from cost, we may

industries were producing products for direct consumption. The question thus arises, how to treat industries producing intermediate products. If we neglect them altogether, we would be overlooking the fact that their resource shifts and price changes do ultimately change the prices and amounts of consumer goods. If, on the other hand, we pretend that these intermediate industries face the consumer directly and thus directly affect consumer welfare, we neglect the fact that some of the resource shifts in the intermediate sector will have opposing influences on the prices and quantities of consumer goods. Obviously, this second possibility is the safer of the two, in the sense that it can only overestimate, not underestimate, the improvement in welfare that will take place. We can therefore follow this course in applying the Hotelling formula to our data. The results are shown in column 4 of Table 1. This gives, opposite each industry, the amount by which consumer welfare would increase if that industry either acquired or divested itself of the appropriate amount of resources. The total improvement in consumer welfare which might come from our sample of firms thus turns out to be about 26.5 million dollars. Blowing up this figure to cover the whole economy, we get what we really want: an estimate of by how much consumer welfare would have improved if resources had been optimally allocated throughout American manufacturing in the late twenties. The answer is 59 million dollars—less than one-tenth of 1 per cent of the national income. Translated into today's national income and today's prices, this comes out to 225 million dollars, or less than $1.50 for every man, woman, and child in the United States.

Before drawing any lessons from this, I should like to spend a little time evaluating the estimate. First let us look at the basic assumption that long-run costs are constant. My belief is that this is a good assumption, but that if it is wrong, costs in all probability tend to be increasing rather than decreasing in American industry. And the presence of increasing costs would result in a lowering of both our estimates. Less resources would have to be transferred in order to equalize profit rates, and the increase in consumer welfare resulting from the transfer would be correspondingly less.

On the other hand, flaws in the data probably operate to make our estimate of the welfare loss too low. Take for example the question of patents and good will. To the extent that these items are assigned a

write the total welfare loss due to monopoly as $\frac{1}{2}\Sigma r_i^2 q_i$ if the elasticities of demand are unity, and as $\frac{1}{2}\Sigma r_i^2 q_i k_i$, if the elasticities of demand are $k_i$. In column 4 of Table 1, I attribute to each commodity a welfare loss equal to $\frac{1}{2} r_i^2 q_i$. This measure of the welfare loss due to monopoly abstracts from distributional considerations. Essentially it assumes that the marginal utility of money is the same for all individuals. Alternatively, it may be viewed as measuring the welfare gain which would occur if resources were shifted from producing $Q'$ to producing $Q$, and at the same time the necessary fiscal adjustments were made to keep everybody's money income the same.

value on the books of a corporation, monopoly profits are capitalized, and the profit rate which we have used is an understatement of the actual profit rate on real capital. Fortunately for us, Professor Epstein has gone into this question in his study. He finds that excluding intangibles from the capital figures makes a significant difference in the earnings rates of only eight of the seventy-three industries. I have accordingly recomputed my figures for these eight industries.[3] As a result, the estimated amount of resource transfer goes up from about 1½ per cent to about 1¾ per cent of the national total. And the welfare loss due to resource misallocations gets raised to about 81 million dollars, just over a tenth of 1 per cent of the national income.

There is also another problem arising out of the data. Epstein's sample of firms had an average profit rate of 10.4 per cent during the period I investigated, while in manufacturing as a whole the rate of return was 8 per cent. The reason for this divergence seems to be an overweighting of high-profit industries in Epstein's sample. It can be shown, however, that a correct weighting procedure would raise our estimate of the welfare cost of equalizing profit rates in all industries by no more than 10 million dollars.[4]

[3] Following is a breakdown of the adjustment for the eight industries in question.

| Industry | Adjusted Profit Rate* | Adjusted Rate of Excess Profit | Adjusted Amount of Excess Profits (Millions) | Adjusted Welfare Loss (Millions) |
|---|---|---|---|---|
| Confectionery | 21.1 | 10.7 | 11 | .530 |
| Tobacco | 19.0 | 8.6 | 66 | 2.225 |
| Men's clothing | 14.9 | 4.5 | 5 | .068 |
| Stationery | 8.8 | — | — | — |
| Newspaper publishing | 27.9 | 17.5 | 67 | 5.148 |
| Proprietary preparations | 27.8 | 17.4 | 42 | 4.121 |
| Toilet preparations | 50.8 | 40.4 | 6 | 1.400 |
| Printing machinery | 12.9 | 2.5 | 2 | .064 |
| | | | 199 | 13.556 |
| Less previous amount of excess profit or welfare loss | | | −100 | −3.845 |
| Net adjustment | | | 99 | 9.711 |

* Epstein, *op. cit.*, p. 530.

[4] Epstein's results in samples from small corporations (not included in his main sample) indicate that their earnings rates tend to be quite close, industry by industry, to the earnings rates of the large corporations in the main sample. This suggests that the average rate of profit in the main sample (10.4 per cent) was higher than the average for all industry (8 per cent) because high-profit industries were overweighted in the sample rather than because the sampled firms tended to be the high-profit firms within each industry. The overweighting of high-profit industries affects our estimate of the welfare cost of resource misallocations in two ways. First, quite obviously, it tends to overstate the cost by pretending that the high-profit industries account for a larger share of the aggregate product of the economy than they actually do. Second, and perhaps not so obviously, it tends to under-

Finally, there is a problem associated with the aggregation of manufacturing into seventy-three industries. My analysis assumes high substitutability among the products produced by different firms within any industry and relatively low substitutability among the products of different industries. Yet Epstein's industrial classification undoubtedly lumps together in particular industries products which are only remote substitutes and which are produced by quite distinct groups of firms. In short, Epstein's industries are in some instances aggregates of subindustries, and for our purposes it would have been appropriate to deal with the subindustries directly. It can be shown that the use of aggregates in such cases biases our estimate of the welfare loss downward, but experiments with hypothetical examples reveal that the probable extent of the bias is small.[5]

Thus we come to our final conclusion. Elimination of resource misallocations in American manufacturing in the late twenties would bring with it an improvement in consumer welfare of just a little more than a tenth of a per cent. In present values, this welfare gain would amount to about $2.00 per capita.

Now we can stop to ask what resource misallocations we have measured. We actually have included in the measurement not only monopoly misallocations but also misallocations coming out of the dynamics of economic growth and development and all the other elements which would cause divergent profit rates to persist for some time even in an effectively competitive economy. I know of no way to get at the precise share of the total welfare loss that is due to monopoly, but I do think I have a reasonable way of pinning our estimate down just a little more tightly. My argument here is based on two props. First of all, I think it only reasonable to roughly identify monopoly power with high rates of profit. And secondly, I think it quite implausible that more than a third of our manufacturing profits should be monopoly profits; that is, profits

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state the cost by overstating the average rate of profit in all manufacturing, and hence overstating the amount of profit which is "built in" to the cost curves in the present analysis. The estimated adjustment of 10 million dollars presented in the text corrects only for this second effect of overweighting and is obtained by imputing as the normal return to capital in the Epstein sample only 8 per cent rather than 10.4 per cent and recomputing the welfare costs of resource misallocations by the method followed in Table 1. It takes no account of the first effect of overweighting, mentioned above, and thus results in an overstatement of the actual amount of welfare cost.

[5] The extent of the bias is proportional to the difference between the average of the squares of a set of numbers and the square of the average, the numbers in question being the rates of excess profit in the subindustries. Consider an industry composed of three subindustries, each of equal weight. Assume, for an extreme example, that the rates of excess profit (excess profit expressed as a per cent of sales) are 10 per cent, 20 per cent, and 30 per cent in the three subindustries. The average rate of excess profit of the aggregate industry would then be 20 per cent, and, by our procedure, the estimate of the welfare loss due to that industry would be 2 per cent of its sales. If we had been able to deal with the hypothetical subindustry data directly, we would have estimated the welfare loss associated with them at $2\frac{1}{3}$ per cent of the aggregate sales.

which are above and beyond the normal return to capital and are obtained by exercise of monopoly power. I doubt that this second premise needs any special defense. After all, we know that capital is a highly productive resource. On the first premise, identifying monopoly power with high profits, I think we need only run down the list of high-profit industries to verify its plausibility. Cosmetics are at the top, with a 30 per cent return on capital. They are followed by scientific instruments, drugs, soaps, newspapers, automobiles, cereals, road machinery, bakery products, tobacco, and so on. But even apart from the fact that it makes sense in terms of other evidence to consider these industries monopolistic, there is a still stronger reason for making this assumption. For given the elasticity of demand for an industry's product, the welfare loss associated with that product increases as the square of its greater-than-normal profits. Thus, granted that we are prepared to say that no more than a third of manufacturing profits were monopoly profits, we get the biggest welfare effect by distributing this monopoly profit first to the highest profit industries, then to the next highest, and so on. When this is done, we come to the conclusion that monopoly misallocations entail a welfare loss of no more than a thirteenth of a per cent of the national income. Or, in present values, no more than about $1.40 per capita.

Before going on, I should like to mention a couple of other possible ways in which this estimate might fail to reflect the actual cost of monopoly misallocations to the American consumer. First, there is the possibility that book capital might be overstated, not because of patents and good will, but as a result of mergers and acquisitions. In testing this possibility I had recourse to Professor J. Fred Weston's recent study of mergers. He found that mergers and acquisitions accounted for only a quarter of the growth of seventy-odd corporations in the last half-century (*The Role of Mergers in the Growth of Large Firms*, pages 100-102). Even a quite substantial overstatement of the portion of their capital involved in the mergers would thus not seriously affect the profit rates. And furthermore, much of the merger growth that Weston found came in the very early years of the century; so that one can reasonably expect that most of the assets which may have been overvalued in these early mergers were off the books by the period that I investigated.

The second possibility concerns advertising expenditures. These are included as cost in accounting data, but it may be appropriate for our present purpose to include part of them as a sort of quasi-monopoly profit. I was unable to make any systematic adjustment of my data to account for this possibility, but I did make a cursory examination of some recent data on advertising expenditures. They suggest that adver-

tising costs are well under 2 per cent of sales for all of the industries in Table 1. Adjustment of our results to allow for a maximal distorting effect of advertising expenditures would accordingly make only a slight difference, perhaps raising our estimate of the welfare cost of monopoly in present values to $1.50 per capita, but not significantly higher.[6]

I should like now to review what has been done. In reaching our estimate of the welfare loss due to monopoly misallocations of resources we have assumed constant rather than increasing costs in manufacturing industry and have assumed elasticities of demand which are too high, I believe. On both counts we therefore tend to overstate the loss. Furthermore, we have treated intermediate products in such a way as to overstate the loss. Finally, we have attributed to monopoly an implausibly large share—33⅓ per cent—of manufacturing profits, and have distributed this among industries in such a way as to get the biggest possible welfare loss consistent with the idea that monopolies tend to make high profits. In short, we have labored at each stage to get a big estimate of the welfare loss, and we have come out in the end with less than a tenth of a per cent of the national income.

I must confess that I was amazed at this result. I never really tried to quantify my notions of what monopoly misallocations amounted to, and I doubt that many other people have. Still, it seems to me that our literature of the last twenty or so years reflects a general belief that monopoly distortions to our resources structure are much greater than they seem in fact to be.

Let me therefore state the beliefs to which the foregoing analysis has

[6] I was unable similarly to take account of selling costs other than advertising expenditures, even though some of such costs may be the price paid by firms to enhance market control or monopoly position. In principle, clearly, some share of selling costs should be taken into account, and it is a limitation of the present study that no adjustment for such costs was possible. Scrutinizing Table 1, however, I should suggest that such selling costs are important in only a few of the industries listed, and that an allowance for them would almost certainly not alter the general order of magnitude of the estimates here presented. It should be pointed out, also, that the general conclusions reached in this paper are not closely dependent on the precise data used. Suppose, for example, that we had observed the following situation: industries accounting for half the output of American manufacturing were charging prices which yielded them a 10 per cent "monopoly profit" on sales, while the remainder of industries earned a constant rate of profit on capital (here called normal profit) but no more. If we were, in this situation, to reallocate resources so as to equalize profit rates in all industries, the prices of competitive products would rise and those of monopolistic products would fall. If demand for the product of each sector were assumed to be of unit elasticity, we would estimate the gain in welfare incident upon the reallocation of resources at .125 per cent of total industrial sales. This would be just about a tenth of a per cent of the national income if the ratio of manufacturing sales to national income approximated its 1924-28 figure. The estimated welfare gain is obtained as follows: Under our elasticity assumption, prices would rise by 5 per cent in the competitive sector and fall by 5 per cent in the monopolistic sector, and quantities would change inversely by an equal percentage. Taking 100 as the aggregate sales of manufacturing, the change in output in each sector will be 2.5, and taking 1 as the index of initial prices in each sector, the change in price in each sector will be .05. According to the Hotelling formula, the welfare gain coming from each sector will be $\frac{1}{2}(2.5)$ (.05), and when these gains are added together the aggregate gain turns out to be .125.

led me. First of all, I do not want to minimize the effects of monopoly. A tenth of a per cent of the national income is still over 300 million dollars, so we dare not pooh-pooh the efforts of those—economists and others—who have dedicated themselves to reducing the losses due to monopoly. But it seems to me that the monopoly problem does take on a rather different perspective in the light of present study. Our economy emphatically does not seem to be monopoly capitalism in big red letters. We can neglect monopoly elements and still gain a very good understanding of how our economic process works and how our resources are allocated. When we are interested in the big picture of our manufacturing economy, we need not apologize for treating it as competitive, for in fact it is awfully close to being so. On the other hand, when we are interested in the doings of particular industries, it may often be wise to take monopoly elements into account. Even though monopoly elements in cosmetics are a drop in the bucket in the big picture of American manufacturing, they still mean a lot when we are studying the behavior of this particular industry.

Finally I should like to point out that I have discussed only the welfare effects of resource misallocations due to monopoly. I have not analyzed the redistributions of income that arise when monopoly is present. I originally planned to discuss this redistribution aspect as well, but finally decided against it. All I want to say here is that monopoly does not seem to affect aggregate welfare very seriously through its effect on resource allocation. What it does through its effect on income distribution I leave to my more metaphysically inclined colleagues to decide. I am impelled to add a final note in order to forestall misunderstandings arising out of matters of definition. Resource misallocations may clearly arise from causes other than those considered here: tariffs, excise taxes, subsidies, trade-union practices, and the devices of agricultural policy are some obvious examples. Some of these sources of misallocation will be discussed in a forthcoming paper. Suffice it to say here that the present paper is not concerned with them.

## DISCUSSION

Ruth P. Mack: I start with Mr. Harberger's paper. To place it in the session's assigned subject, let me say that it is addressed to competition in factor markets in the long run. More particularly, he considers the factor, capital, and defines the long run for statistical purposes as five years between 1924 and 1928. Monopoly profits are defined as existing in an industry when the average rate of return on invested capital—both share capital and bonded debt—is higher than that earned by all the companies in the Epstein sample—a little more than 10 per cent. His maximum estimate indicates that around 40 per cent of manufacturing profits are due to monopoly. The elimination of this misallocation of resources involves a maximum shift of $2\frac{1}{2}$ per cent of resources and a gain of $\frac{1}{13}$ of 1 per cent in consumer welfare.

The calculations on which the figures are based and the argument supporting them are stimulating and ingenious. They involve, perforce, all sorts of assumptions with any one of which someone would surely quarrel such as the assumption of unit elasticity for all industry and all consumer goods; the horizontal long-term cost curve which is especially vulnerable in the context in which it is used. They involve, also, the statistical difficulties; namely, the rather special character of the Epstein data, the use of industry rather than individual firm profits figures (which raises theoretical problems, too), the questionable weighting system implicit in blowing up Epstein's sample to cover total manufacturing, and finally the question whether the five-year period can dub for long-run partial equilibrium conditions. As I say, someone would certainly quarrel with each of these matters, and I would—quite energetically—with some of them.

But in view of the major results of the calculation there is little reason to dwell on detailed criticism. The calculations indicate that if monopoly is identified by excess profits and elasticity of demand is no greater than one, the redistributive welfare effects of monopoly are negligible even if we pick out of a hat, or out of Harberger-Epstein, an extremely high estimate of the proportion of manufacturing profits that are due to monopoly. This could hardly be otherwise since even total profits constitute only a small proportion of national income.

The most serious quarrel with the paper involves what is not in it rather than what is. Of course, no one is obliged to cover more of a field than he chooses to, but Mr. Harberger bases general conclusions about the importance of monopoly on the specific calculations. I quote: "But it seems to me that the monopoly problem does take on a rather different perspective in the light of the present study. Our economy emphatically does not seem to be monopoly capitalism in big red letters."

Whether this is true or not, how can the calculations of this paper support any general evaluation of the impact of monopoly? Harberger's measures equate maldistribution of capital with greater than average profit rates for a five-year period. I have mentioned a few of the doubtful aspects of the

measurement but have left out the three most important, since they lie outside of the calculation itself. First, the notion that profits are an adequate measure of monopoly due to maldistribution of capital has often been called in question. More damaging is the second problem: neglect of maldistribution of other factors of production that might be a function of monopoly. Monopoly certainly can yield inefficient use of labor and materials as well as of capital. This would mean, in effect, a departure from some proper figure for value added, or perhaps even total costs, rather than simply for profits. I ask, in other words, whether the horizontal cost curve to which Harberger adds the 10 per cent profits may itself be too high, from the point of view of consumer welfare, because of monopoly elements in labor or material costs, because costs are included that consumers under truly competitive conditions would not elect to pay for (high marketing, advertising and packaging costs, for example), because perhaps of restrictions in a potential rate of technological change. Finally, toward what other less than optimal results does monopoly contribute: maldistribution of income, inflexibility in all sorts of adjustments including prices to changes in economic conditions—to pick two at random?

Mr. Nutter's paper addresses itself to product markets, and ostensibly in the short run, though actually the long run seems to play cammel.

Competitive behavior of a firm—and it is on behavior that he believes emphasis should lie—takes place wherever there is a persistent tendency to produce at an output at which marginal costs approach selling price. This occurs when demand is very elastic at those outputs at which marginal costs and selling prices approach one another. It need not be so throughout the whole range of outputs. He makes a considerable point of the "persistence and strength" and the "speed and regularity," the "promptness and continuousness" with which these basic conditions operate.

They operate promptly and continuously in large parts of agriculture, some mining and some manufacturing—industries, which, he estimates, account for perhaps 10 per cent of the national income. May I call this Group I.

But competitive behavior goes far beyond, Nutter believes, this generally agreed area. For, by exchanging the requirement of complete elasticity throughout the whole range for elasticity in the neighborhood of the margin, the necessity for homogeneity of product may be exchanged for homogeneity at the margin—a situation where merely a large number of cagey buyers and sellers can produce competitive selling for the firm. Products, though similar, do not need to be identical, nor do they need to have identical prices but merely ones bearing a constant relation to one another. These conditions must, in addition, be stable in certain respects. Their enumeration certainly suggests that though competition may be fairly prompt and continuous in this sort of firm, it will not be as prompt or as continuous as in Group I. This Group II, then, includes industries with a large number of firms producing products that are differentiated but "marginally" homogeneous; they are found in services, trade, and construction and account for perhaps 35 per cent of national income.

Nutter goes on to describe other areas where competition, though irregular and delayed, nevertheless does operate in a direct fashion, and a still larger

area where the constant pressure of potential competition works toward competitive ends albeit with delays and discontinuities. In one way or another, all but perhaps 30 per cent of the national income might be produced in line with at least long-run competitive conditions.

Mr. Nutter concludes that "there is more competition in the 'long' than in the 'short' run" and "competition is the normal condition in our economy."

All this seems to me to mean that, in essence, the degree of competitiveness has been referred to the length of the adjustment period necessary for demand to become elastic in the neighborhood of where marginal costs and price approach one another. The shorter the period, the more competitive the firm. This is admittedly a strong simplification of Nutter's argument but I think it is neverthless the fundamental point.

Is not the crux of the matter, then, precisely how long a time is required? Eventually, all costs become marginal and price quite elastic. But if "eventually" is a very long time and many other influences are at work in the meantime (and I shall come back to the sorts of influences in a minute), how much of the actual course and even level of prices is explained by the slow drift toward an equilibrium level? It is not even clear whether price drifts toward marginal costs via appropriate changes in output, or whether marginal costs drift toward price via changes in technology and scale, in product, in input mix. Thus when long intervals are required for equilibrium to establish itself, the chances are that the competitive process, in the narrow fashion in which it is here defined, will neither have explained much of the price change that has occurred nor, even for the limited area encompassed, explained what caused what.

Our interest then focuses in Groups I and II where competition, as defined, works continuously and promptly. More especially, it fastens on Group II—the novitiates that Mr. Nutter introduces to the competitive elect. But I think before they can be admitted to membership, we need to know quite a bit more about them and their qualifications.

There is the problem of meaningfulness of marginal costs as a short-run determinant of prices, when capital and other overhead costs are large and nonsalable and when firms make many products the marginal costs of which are difficult or impossible to isolate. I would like to see spelled out why these familiar difficulties do not apply here.

Second, it is hard to see how the allocation of firms in various industries to certain competitive classes can possibly be soundly accomplished with vision restricted to the individual firm. The minute we move to anything less than the classic competitive situation, a firm is confronted with options about prices, output, and many other things. How these options will be exercised is a function of a complex network of factors in the industry and in its relationships to customers and suppliers. How then can one determine whether an underlying tendency toward marginal cost pricing exists within a firm without considering conditions in the industry at large. Mr. Nutter says early in his paper, that "elements of competition can . . . be treated additively. Competitive selling of productive factors, plus competitive buying of them, plus competitive selling of the product, plus competitive buying of it, yields

a competitive market." He addresses himself to the piece: competitive selling. But I would claim that within this piece, the single firm cannot be isolated from industry at large; for the relationship between firm and industry, when once they depart from the purely competitive model, are more nearly geometric than additive.

If these points are valid, the paper requires that the characteristics of Group II and even of Group I be sharpened and argued in a far closer fashion than was accomplished in this brief presentation. Until this is done, the conclusion that "competition is the normal condition in our economy" is not established unless the time period relevant to the statement is too long to be meaningful or unless competition is used in the general sense in which it is clearly one of the outstanding earmarks of our culture and therefore "normal" anywhere.

Here we returned to Nutter's fundamental point. He decries the "multitude of criteria" set up in contemporary price theory and holds that "the usefulness of our theoretical apparatus will be greatly improved if theoretical cases are set up with a view to distinguishing types of behavior; the first distinction to focus on is that between competitive and noncompetitive behavior." But I wonder whether, were these distinctions drawn sharply enough to be really persuasive and meaningful, analytic criteria of the sort that Nutter deplores would not perforce insinuate themselves right back into the picture.

This leaves me in the unhappy state of agreeing entirely with the author of this paper as to the reality and importance of the problem to which he addresses himself—the forest of price theory—but I cannot feel content, on the basis of this paper, that he has it well surveyed for building lots.

Before closing, a word on how the two papers bear on the problem posed in the title of this session. No sharp contrasts have been drawn between competition involving "factors" of production rather than "products." Though both have entered the discussion, the "versus" has not, and so we remain ignorant. As to the long run rather than short run, the long run is the clear winner.

But I wonder whether it does not win virtually by definition. For, if we confine criteria of competition narrowly to those focusing on just distribution of resources and a price that draws toward marginal costs (admitting Nutter's modifications), the criteria themselves encompass more of the economic environment and process the longer the time period for which they are considered. In other words, the restrictions of the competitive model relax as time passes. More resources grow fluid, more costs become marginal, output has more ways in which to adjust. How could competition so defined not be more prevalent in the long than in the short run?

But if our view of competition is stretched to include the many social and economic problems comprehended in the words monopoly and competition in their broad meanings, I am not sure the verdict would still fall so clearly to the long run.

For one thing, price competition itself has many forms other than in effect movement along supply and demand schedules and factors drawing toward an equilibrium position. In the short run, violent swings in many prices, and I

dare say most of the movement of most prices, is due, diagrammatically, to shifts in supply and especially in demand schedules. All sorts of intensely competitive behavior may underly these shifts.

In all this lively short-run competition, it is very hard indeed to say much about how it is conditioned by the size of firms. Certainly, one would like to know whether large companies with trade-marked products, or with, in effect, a trade-mark built into their name, respond differently to short-term conditions of supply and demand than the smaller companies, *other things the same* (an important qualification since frequently small and large companies do somewhat different sorts of business).

Strong short-run, as contrasted to long-run, competition takes place, of course, in terms other than price. Firms that are by and large resigned to established industry positions, try to steal laps in the short run; new markets are invaded; new products devised; new technologies exploited; and from each, short-run battles ensue. What is the impact on cyclical fluctuation of various sorts of pseudo competitive and pseudo monopolistic behavior, on seasonal patterns which seem likewise to have interesting cyclical counterparts?

I raise these questions not to confuse the issue, which they certainly do, but to indicate that, at best, the discussion has been confined to a small corner of the subject emblazoned on the program. This is no criticism. It is simply a fact.

# FARM PRICES AND FARM INCOMES IN AMERICAN AGRICULTURE

## Is American Agriculture Still Essentially Competitive and Laissez Faire?

## ATTEMPTS TO RESTRICT COMPETITION IN AGRICULTURE: THE GOVERNMENT PROGRAMS

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Agriculture has long been regarded as the last stronghold of the competitive economy which many nineteenth-century economists regarded as normal. The general title of this session implies that there is now some question as to whether it, too, may have become less competitive than in earlier times. It is a logical question in view of the restrictionist character of some of the farm programs initiated during the past two decades.

Until about 1920, the farm groups stood firmly for the maintenance of competition, not only in agriculture, but in the economy as a whole. During the late 1800's, they took the lead in bringing under regulation the so-called "natural" monopolies such as the railroads and other public utilities. They supported vigorously the antitrust policy that took shape in the Sherman Act and the legal structure based on it.

However, the forces making for a decline in the competitiveness of the economy were powerful and of increasing significance. Improved transportation, more adequate communication, and technological change were creating economies of scale in industry and business that were powerful enough to override the vague and somewhat unrealistic legal barriers set up to foster and maintain competition. The gains to industry and business were of two types, so closely interrelated that they could not be sharply segregated; the gains in efficiency that could be achieved through larger scale organization; and the protection that could be given to the price structures of the products and services supplied by business organizations.

These gains were so significant and the loopholes in the law so numerous that the over-all trend in economic structure was in the direction of larger and larger business units and the minimization of the kinds of price competition previously regarded as appropriate and desirable. Labor likewise was laying the groundwork for a structural arrangement that would protect workers against the full impact of unregulated competition for jobs.

As yet, government was playing no very positive role in the situation.

It was fighting a losing battle to preserve the old type of economy but inadvertently was moving in directions that fostered rather than inhibited monopolistic types of action. The clarification of the legal status of corporations gave them far greater powers and opportunities than they had enjoyed in the previous century. Financial organization was improving, partly with the blessing of government, so that stocks could be sold more widely and vastly greater aggregations of capital could be assembled. Labor was gradually gaining legislative authorizations that enabled it to restrict competition in the quest for jobs and in the wage rates that could be accepted.

Thus the farmer found himself faced with a situation in which more and more of the economy was coming under group controls of one kind or another while he continued to operate on a small-unit basis and with almost no control over amounts produced or prices received. The internal structure of his enterprise was such that he usually found it to his advantage individually to maintain production regardless of changes in demand. Except as nature intervened or as prices became so low or so high as to discourage or stimulate production, there was little important modification of output from year to year. Hence the major impact of a change in demand was on the prices received for farm products. Prices varied greatly from year to year and agriculture came to be a highly speculative business.

This tendency, which became more pronounced as agriculture became more commercial, was almost the opposite of that which was apparent in industry and in labor organizations. There the increasing drift toward centralized control was leading more and more to a tendency to hold prices and wages stable (except when there were major changes in the value of the dollar) and to adjust to changes in demand by regulating the amounts produced or offered. There were, of course, limits to how far such controls could be carried and they varied from industry to industry and from one labor group to another, but the trend was in that direction.

Farmers, like businessmen and wage workers, are very price conscious, perhaps excessively so. Be that as it may, there was growing dissatisfaction among farmers faced with a situation in which, as they put it, they were told what they would pay for the things they bought and at the same time were told what they would receive for the things they sold.

Nevertheless, they still clung to the idea that the solution to their difficulties lay in restoring competition in the nonfarm industries. This attitude was modified significantly in the early twenties. Demand changes of far-reaching consequence plunged farm prices from an all-time high to levels that were little above those of the prewar years.

Production was maintained or even increased, partly as a result of the stimuli that had come into play during the war years.

The prices of nonfarm products fell also but not so far, and the situation stabilized rather quickly. But the new terms of trade were very unfavorable to agriculture. Whereas in the war period farm and nonfarm prices rose roughly in unison, farm prices fell after the war to about 124 (1909-14 = 100) while nonfarm prices fell only to about 160. The drop in some kinds of farm products was much more severe. Feed grains, for example, fell to 92 and food grains to 112.

It was at this juncture that farm sentiment in regard to the use of monopolistic procedures underwent a change, at least so far as farm products were concerned. In a meeting held in Chicago under the auspices of the newly formed American Farm Bureau Federation, a dynamic young attorney, Aaron Sapiro, put forward a new doctrine in regard to the marketing of farm products. He contended that farmers should cease their efforts to restore a competitive system that was outmoded and, instead, should themselves adopt the methods and forms of organization that had become so general in business. They should form large-scale, national co-operative marketing associations, should gain control of the bulk of each product (he suggested 90 per cent or more), and should then "merchandise" it in much the same way as a large corporation would sell its product. That is, they should regulate the flow onto the market, should specify the prices at which the product would be sold, should resort to class pricing if need be, and should be prepared to dump or withhold quantities that could not be sold at "fair" prices. Some control over production was implied but not stressed at this time.

The Sapiro idea swept over the country. New large-scale co-operative selling organizations were launched for grain, cotton, tobacco, livestock, and many other products. Most of the states passed new legislation authorizing farmers to organize and operate co-operatives of the Sapiro type, that is, co-operatives that were highly centralized and designed to enter into binding contracts with growers, and to use novel types of subsidiary corporations for financing, processing, storing, and selling.

The movement in this form collapsed almost as suddenly as it had grown up. By 1924 it had virtually ceased to be significant. However, a seed had been sown that was to affect both attitudes and organization in the period with which we are here mainly concerned. The old antitrust drive had fallen by the wayside. Farmers were militantly demanding efforts to bring about some method of handling farm products that would bring to them what they regarded as a more equitable share of the total national income.

The collapse of the Sapiro movement coincided roughly with the emergence of a new plan under which it was proposed that the government itself should play a much larger role in the marketing of farm products and should undertake to do some of the things the farmers had found themselves unable to do through their own efforts. This approach, known as the McNary-Haugen plan, gained widespread backing in the farm areas and became the major political issue of the twenties.

Twice passed by the Congress and twice vetoed by President Coolidge, the McNary-Haugen idea still was a potent factor in the political situation when the election of 1928 came up. It led to campaign commitments which virtually forced the incoming Hoover Administration to put forward a plan of its own: one that seemed to imply less government intervention than the McNary-Haugen plan but nevertheless one which was to go much farther in that direction than would have been considered acceptable in earlier periods, except as a war measure.

Both the McNary-Haugen plan and that of the Farm Board implied more general acceptance by farmers of the idea of trying to achieve monopoly gains than had any proposals made in earlier periods. The McNary-Haugen plan called for a relatively simple two-price arrangement which, of course, could not be workable unless the government or some very large co-operative marketing association had virtually complete control of the supply. The plan was, in fact, greatly oversimplified by being discussed almost wholly in terms of wheat, the one commodity for which it would have been most workable. There was little discussion of how such a plan could be applied to corn or hogs or even to such export products as cotton or tobacco where the percentage of the crop exported was very large.

The Farm Board program as originally contemplated did not imply efforts to achieve significant monopoly gains. However, it did look to the creation, with government aid, of large-scale national co-operative marketing associations. In part the gains were presumed to be from greater efficiency and reduced costs, but there was also an expectation that such associations would be able to market farm products in ways that would be more like those of the large industrial corporations.

The program, at least as seen by many of the farm leaders, was in effect a reversion to the plans popularized by Aaron Sapiro in the early twenties but with some government assistance in carrying them out. In its later stages, as a result of the severe economic depression, it took on more of the characteristics of a government monopoly—at least for cotton, wheat, and wool.

As the depression deepened and confidence in the Farm Board

declined, farmers became willing to support much more vigorous intervention by government than had ever been proposed by them in earlier periods.[1] The new programs launched in 1933 implied acceptance in principle of the use of monopolistic methods to raise farm prices. A similar change in public attitude was apparent in business and labor circles. Competition had come to be looked upon as "destructive" and antisocial.

With government leaders strongly committed to a planned rather than a competitive economy and with this gradual change in the attitudes of farmers, the farm programs, in principle at least, took on a strongly monopolistic tone. In large part, this can be regarded as acceptance of leadership which pointed in that direction rather than active espousal of a sharply reversed national policy.

Farmers still do not like monopolies in nonfarm industries and are less than enthusiastic about them in agriculture. So far as agriculture is concerned, they have accepted this approach as the lesser of two evils. In doing so they have obviously weakened their position in respect to monopolistic practices in nonfarm industries and, in fact, have become far less militant in their opposition to monopolies in general. There is some warrant for questioning whether, in their efforts to benefit by monopolistic devices, they may not have given ground in the matter of restrictions on other groups that are in a position to exploit the relaxation of controls far more effectively than they can do.

Be that as it may, the attempt to control production by instituting acreage restrictions and, later, marketing quotas was undoubtedly a sharp reversal of the old policy of relying on the markets and on competition between producers to determine prices. In some lines, marketing agreements, which were much like the NRA codes, marked an even more definite break with earlier doctrine and legislation, so much so that they would inevitably have come into conflict with the older antitrust laws had these not been specifically relaxed by the new legislation.

Some of the devices instituted during these years might perhaps have been feasible for very large private monopolies. Many of them, however, were too extensive and costly or involved too much risk to be practical for any agency other than government. Among these were the storage and price supporting activities of the Commodity Credit Corporation, the operations of the Surplus Marketing Corporation, the occasional subsidies on exports and the cotton plow-up and pig-sow slaughter campaigns. The vast and uneconomic destruction of potatoes in 1949 also falls in this class.

[1] The farmer attitudes here broadly summarized are those of the major farmer organizations and their spokesmen. There were, of course, many individual farmers who clung to the older point of view.

In brief, it seems fair to state that, ideologically, agriculture has moved rather far from its traditional position as the principal defender of the competitive system. Has it, in fact, been able to break away from it or are the forces of competition so powerful that they have continued to dominate the situation despite these major changes in policy?

This as I see it is the problem to which we are seeking answers here. The question obviously is not confined to agriculture. Competition still is a powerful influence in both farm and nonfarm operations. But it is taking new forms. Price competition has been de-emphasized while sales effort, quality improvement, and service have become more prominent. Probably the most complete abandonment of competition as a guiding principle has occurred in the labor field.

However, the kinds of outlet for competitive forces which have been mentioned above are not well suited to farm products. Most of them are standardized, staple commodities. Aggressive selling is not notably effective in increasing over-all consumption. Some improvement in quality is possible but it does not as a rule give the farm producer a favored or patent-protected position in the market. Other farmers can and do adopt the improved methods and strains rather quickly. In fact, the government spends considerable amounts of money to enable and induce them to do so. In agriculture, the competitive drive, if effective, will find its outlet in evading the limitations on output, in shifts to uncontrolled products, and in bidding up the prices of lands that have favored status in the way of production rights.

The farm programs have at times modified the competitive situation in at least three ways.[2] The amounts put on the market have been influenced and prices have been affected, not only as a result of changes in supply, but in other ways as well. Direct or indirect price fixing under government authority has been a feature of many of the programs, either through marketing agreements or by means of price supports and price controls. In addition, there have been sizable direct transfers of income both from the Treasury to farmers and from consumers to farmers. There has also been at times a heavy assumption of risk by the government which, because of fortuitous circumstances, did not result in the heavy losses that might have been anticipated.

Both short-run and longer term effects need to be considered. That

[2] A number of farm programs which do not bear directly on market competition are omitted from this discussion. The government-supported educational activities, particularly the agricultural extension services, tend to increase the competitiveness of agriculture. The federally-sponsored credit agencies likewise are designed to increase competition in the field of credit. Other activities such as the rural electrification program, rural mail delivery, and farm-to-market roads were undertaken as a means of bringing the real incomes of farm people more directly into line with those of nonfarm people. They have some bearing on competitive conditions and efficiency but a much less direct one than the programs here under consideration.

is, even though the competitive situation in agriculture may have been and undoubtedly was affected part of the time, we still are faced with the question of whether these programs brought about structural changes in the industry such that competition has been reduced permanently. Is the basic situation essentially the same as it was before, except as the government continues to intervene in order to minimize the price and income effects of competition?

I am going to state my conclusion rather baldly and shall attempt thereafter to present some of the evidence on which that conclusion is based. Most of the government programs have not changed significantly the basic structure of agriculture nor have they brought about any large amount of self-sustaining change in the competitiveness of agriculture. If the legal authorizations for acreage controls, marketing quotas, and marketing agreements were to be repealed, agriculture would promptly revert to essentially the same type of highly competitive organization as it had before these controls were established.

This is not to say that its financial condition would drop back to what it was in the thirties. In fact, the evidence indicates strongly that so long as general employment is high, agriculture would continue at about its present level of prosperity but not at the levels that prevailed in the forties. That was the period of greatest prosperity farmers have ever experienced in this country or probably anywhere in the world. It came about under almost fully competitive conditions, with little in the way of restrictions on output and not much support of prices by the government, except on a few commodities in the last years of the decade.

The significant factor was, of course, the phenomenal upsurge in demand, part of it a result of government actions taken principally for reasons other than the support of farm prices.[3] It is worthy of note that in the years following 1945 some of the farm products which were least affected by either price supports or government-financed exports were among those which were highest in price. For example, meat animals reached an index of 361 in 1948 (1910-14 = 100) and were well above 300 from 1947 through 1950 though farm products as a whole stood at 285 in their peak year, which also was 1948. Food grains and cotton, both heavily manipulated crops, stood at 250 and 270, respectively, in that year.

There are some exceptions to the above generalization. The fluid milk

[3] Government purchases of a few minor crops used in relief feeding abroad were designed mainly to aid growers of agricultural specialties whose market outlets had been seriously disrupted by war and the postwar shortages of dollar exchange. The heavy subsidies provided under the International Wheat Agreement in recent years may likewise be put partly in this class, though they were also in part payments of risk losses incurred at a time when it was thought that wheat would be in excess supply and would need assured outlets.

markets have come under increasing control during the past twenty years and the existing market structure probably would persist in most markets even if the government should discontinue its controls. It should be noted, however, that the controls introduced by the federal government were in the main proliferations of patterns already well established under private and state auspices. Here, as in most of the other marketing agreement programs, the primary objective appears to have been to introduce stability into an inherently unstable marketing situation rather than to raise prices per se. The techniques used, however, are monopolistic in type rather than competitive.

I am seeking here neither to defend nor condemn competition as the major force in determining the allocation of resources in agriculture or in bringing about an equitable distribution of income as between farmers and other economic groups. What I am saying is that it still is the major organizational influence in the agricultural segment of the economy and is likely to remain so, except as government intervenes to hold it in check. Question may be raised also as to whether, even with government intervention, it is actually restrained or merely diverted into other forms.

In an industry which consists of more than five million producing units, all of them small by industrial standards, there is and can be little in the way of small-group determination of over-all output and prices, short of complete authoritative regimentation and planning for the industry as a whole. Segments of it can be and have been controlled at times, but there has never been in this country any serious attempt to control the entire industry or to maximize its over-all income by centralizing control and decision-making. There still are more than five million entrepreneurs and no one of them or any small group of them is sufficiently dominant to exercise control or even price leadership.

Even government, if it is to approach the problem along genuinely monopolistic lines, will have to control not only the amounts of given crops produced but also what is done with the resources thus released for other uses. This applies particularly to manpower and facilities which in many urban industries can be reduced by the simple process of laying off workers or closing plants. Neither device is practical in agriculture. Restrictions, both on the acreages of key crops grown and on the use of acres withdrawn from these crops, were attempted in 1933, but with only very moderate success. The attempt was abandoned shortly thereafter. The results of the program for the decade as a whole seem to have been to increase over-all productivity rather than to reduce it.[4]

[4] The nature of the over-all effect is illustrated in a study made at Ames in 1942. In that study, Schultz and Brownlee concluded that aggregate feed production in the eleven states

So much for the general conclusion. What evidence is there to support it? A few illustrations will have to suffice. In the Farm Board period, efforts were made to support the prices of wheat, cotton, and wool by action taken only at the marketing level. Production was not controlled. Since demand was then at the lowest ebb known in this century, or perhaps in all our history, while supplies were very abundant, a holding operation of this kind could not have much effect on prices, since adequate supplies were available in the free market nearly all through the period. The available evidence indicates that the timing of price declines was affected to some extent but not the returns over the period as a whole, except for such amounts as were supplied in the form of government appropriations.

The holding operation was very similar to those carried out by the Commodity Credit Corporation around 1940 and in 1949 but the surrounding circumstances were different. If the Commodity Credit Corporation had run into a period of greatly reduced demand in the early forties and in 1950, its experience would likely have been similar to that of the Farm Board stabilization corporations, but on a larger scale. It has, of course, larger resources and greater flexibility. Its possibilities as a stabilizer in periods of weak demand or oversupply should not be minimized. Nevertheless, there is as yet no clear evidence that such a device can maintain prices for very long at any level markedly above free market prices, except as it is bailed out periodically by unforeseeable shifts in demand. The CCC holdings of 1941 proved to be a blessing in disguise. Those of the Farm Board would have looked good, also, if war had broken out early in 1932.

The CCC operations are, in the main, a subsidized risk-taking procedure rather than a genuine monopoly technique. The methods used, the form of organization, and the policy framework have been greatly improved over those of the Farm Board days but the underlying philosophy is much the same. However, I do not wish to deprecate the role CCC has played and can play. It has possibilities of great usefulness if rightly used and if it is not assigned duties that are incompatible with its powers and resources.

The other programs initiated in 1933 involved much more specific efforts to restrict competition in agriculture. The criterion chosen implied limitations on production to bring about a level of prices for the principal farm products that would bear the same relationship to nonfarm prices as that which had existed in the years immediately

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covered would not have been significantly different had there been no acreage controls. The proportion of corn in the total feed supply was somewhat smaller than it would have been without acreage controls. However, the production of roughage was increased by an amount that about offset the reduction in the amount of corn. See T. W. Schultz and O. H. Brownlee, *Effects of Crop Acreage Control Features of AAA on Feed Production in 11 Midwest States* (Iowa State College, *Research Bulletin 298*, April, 1942), p. 678.

preceding World War I. It should be noted that this was not a full-scale monopoly approach. It did not seek directly to maximize profits or minimize losses. The objective was the re-establishment of a price relationship. It was, however, an effort to restrict significantly the competition among farmers in a situation which involved, for many farms, decreasing costs per unit with increases in output—a situation which is assumed to favor monopolistic controls on output if demand is insufficient to absorb at satisfactory prices all of the output that can be produced.

The farm programs have, of course, included many other features which cannot be explored here. Among them were income transfers from the Treasury to farmers and from consumers to farmers. There were surplus removal programs, export subsidies, advances of credit through the Commodity Credit Corporation, government assumption of risk, and a host of others. These, though designed to increase farm incomes, do not have an important bearing on the question of competitiveness in agriculture. I shall therefore omit further mention of most of them.

Restrictive programs were adopted in reference to cotton, wheat, corn, hogs, tobacco, peanuts, and various others. How successful were they? Did they bring about changes that would continue if the government stepped out of the picture? The answer has to be a somewhat qualified yes and no, with the no much more prominent than the yes.

In 1933, the July 1 cotton acreage of 40.2 million was brought down to 29.4 million at harvest time, mainly through the cotton plow-up campaign launched in June. The inducement provided was the payment of a fairly high rental for the acres taken out of production. These payments were financed by a processing or excise tax, not by direct appropriation from the Treasury.

Production was not reduced accordingly. The amount grown in 1932, on about 36 million harvested acres, was 13 million bales. That of 1933, on about 27 million acres, was slightly larger. In 1930, only 13.9 million bales had been produced on 42.4 million harvested acres. It is obvious that many factors enter into results of this kind, among them weather, insect infestation, and so on. However, the evidence is fairly clear that competition manifested itself in other ways than that of number of acres grown. The poorest or marginal acres were plowed up. Better care and more fertilizer per acre were used on the ones left in production. The yield per acre in 1933 was 212 pounds, a record that had not been closely approached since 1914, except in 1931 when it was 211 pounds.

So apparent was the inadequacy of acreage controls alone that much stronger measures, including prohibitive taxes on excess production, were written into the laws relating to cotton and tobacco in 1934. As a result, both acreage and production were held down significantly in

1934 and 1935. Nourse, Davis, and Black in their Brookings Institution study estimate that the production of cotton over these three years would have been from 10 to 13 million bales greater (in total) had there been no control program.[5]

However, the inherent power of competition became apparent as soon as government restraints were removed. The vigorous controls provided in the Agricultural Adjustment Act and in the Bankhead Act were relaxed as a result of the adverse decision of the Supreme Court in 1936. Cotton acreage increased from around 28 million in 1934 and 1935 to 34 million in 1937 and production was up from about 10 million bales, to nearly 19 million.

The restoration of quota powers in 1938 and the gradual shift to competing crops brought acreage down again in the late thirties and during the war years. Quotas were re-established, prematurely, in 1950 and are again being invoked on the 1954 crop. The postwar expansion has been mainly in the Western states rather than in the older cotton areas, again, however, a manifestation of the continuing pressure of competition.

In wheat and corn the story is similar though here the effects were greatly modified by the droughts of 1934 and 1936. Nourse, Davis, and Black conclude that, under normal weather conditions, the wheat programs could not have achieved a net reduction of more than 160 million bushels per year—not enough to make possible the reduction of carry-overs in the depressed world market of that period (*ibid.*, page 128).

The dramatic pig-sow slaughter campaign of 1933 made a significant and quick reduction in the hog population, an adjustment that was needed but which was by no means large enough to restore the earlier levels of price. January 1 hog numbers were reduced from 62 million in 1933 to 58 million in 1934 and were brought down much more sharply, to 39 million, in 1935, largely as a result of the drought. Farm value per head, which was around $13.00 in the late twenties, was up only from $4.21 in 1933 to $6.31 in 1935. Thereafter hog numbers continued to be more nearly in accord with demand and values rose to around $12.00 per head in the late thirties.

Production controls on tobacco were more rigorous than those on other crops and, on the whole, have been the most successful. Acreage was reduced sharply in 1934 and the price was increased by more than 50 per cent. Controls have been continued in most of the years since and tobacco prices have shown a greater advance than those of any other crop. The price index stood at 402 in 1950 (1910-14 = 100) as compared

[5] Edwin G. Nourse, Joseph S. Davis, and John D. Black, *Three Years of the Agricultural Adjustment Administration* (Brookings Institution, 1937), p. 138.

to 232 for all crops and 278 for livestock and livestock products.

Tobacco, however, is a very special case. The acreages are small and the mechanisms of control very effective. The cost of the raw product is a small part of the retail price of the end product. The spread between the two consists largely of excise taxes and of storage, holding, and processing costs. Nevertheless, competition at the grower level is very apparent though it does not appear in the form of excess production or decreased prices. In the tobacco areas competition has taken the form of vigorous competitive bidding for lands that are eligible for tobacco allotments. Premiums amounting to several hundred dollars per acre have been paid for such lands in some areas. Where this is done, the advantage of the enhanced price of tobacco is, of course, largely lost to the succeeding owner since it has been discounted in the purchase price of the land.

It would seem to me that the evidence of continuing and vigorous competition is incontrovertible, except possibly in a very few minor crops such as lemons. Even there the privately applied restrictions relate only to the marketing phase, not to production. New producers can still come in freely and older ones can still expand output if they wish. If they do, the impact of such expansion is mainly in the form of larger allocations to by-product uses.[6]

Secondly, restrictions on production and manipulation of prices of any great significance are possible only through government action. The government itself, though equipped with unprecedented authorizations and funds, has not been notably successful in regulating agricultural production or raising prices in times when demand was weak. Seven years of vigorous government intervention during the period 1933 to 1939 succeeded only in raising farm prices from 65 to 95 in terms of 1910-14 as 100. Even this amount of increase was somewhat artificial, since at the close of this period very heavy stocks of wheat, cotton, and corn were being held under government loan and purchase programs. If they had had to be liquidated under demand conditions similar to those of the thirties, the result could only have been a lower price or heavy loss to the government.

Several factors of greater significance than the control programs contributed to the advance in prices that occurred in the thirties. The droughts of 1934 and 1936 cleared away troublesome surpluses, the dollar was revalued, and the economy as a whole recovered to some extent. Demand was stronger both here and abroad than in the early thirties. Even so, the parity ratio of farm to nonfarm prices was up only to 78 in 1939 as compared to 100 in the pre-World War I period.

[6] As previously mentioned, competition has been significantly reduced in the fluid milk industry. The result has probably been more largely in the form of price stabilization than in price raising. In tobacco, prices have undoubtedly been increased significantly.

Does this mean then that the restrictive programs adopted in the thirties were of no value to agriculture? This, it seems to me, is straining the conclusion too far. Such programs may aid agriculture very materially in certain emergency situations. They also may help in bringing about desirable and significant changes which would come certainly much more slowly and possibly not at all if no action were taken.

Oddly enough, one of the most criticized aspects of the early program illustrates best the first type of adjustment; namely, the pig-sow slaughter and the cotton plow-up campaigns. There can be little doubt that the hog population was overexpanded in 1933 in light of the demand then effective. Cotton was also available in greater supply than the market could or would absorb. Agricultural production is peculiarly unresponsive to drastic reductions in price. The actions taken in these two situations undoubtedly helped to restore a reasonable balance between production and available outlets more quickly than would have been possible through reliance on the forces of competition alone. At the same time, prices were not pushed out of line with what had come to be considered normal. A similar adjustment in wheat acreage and production would have been in order had not the drought years caused the very burdensome stocks hanging over the market to be cleared away.

The second type of adjustment is of a different kind and of greater long-term significance. It is best illustrated by the changed situation in the southeastern cotton area. Farm economists, sociologists, and a host of others had long deplored the one-crop agriculture of the cotton states. Yet the system continued. It was a vicious circle in which large production, heavy carry-overs, and low prices kept the cotton farmer struggling to pay off last year's debts and in no position to make constructive changes. The program initiated in 1933 and 1934 made possible and mandatory certain changes in the cotton-state economies, and its results are still in evidence and bid fair to remain so.

Cotton acreage in the eight principal cotton states of the Southeast was reduced from 18.5 million in 1932 to 12.4 million in 1940. On this smaller acreage, 7.2 million bales were being produced in 1940 as compared to 6.7 million in 1932. The average yield per acre had increased from 182 pounds to 291 pounds. In the meantime, the acreage of corn in this area had increased by 1.6 millions, alfalfa acreage was up nearly 80 per cent, and the number of dairy cows had increased from 2.9 million to 3.2 million. The Cotton South has moved far along the way to a better balanced agriculture. The acreage control program, together with the federal funds put into that area, played an important part in bringing about this change. Not all of the gain thus made was due to acreage controls. Part came about as a result of the efforts to conserve soils and the more general educational programs. The growing industrial activity of the area also contributed to the shift out of cotton

and into other types of production. Nevertheless, acreage controls and government subsidies undoubtedly did help to initiate a progressive type of change which has continued in the years since. The South now has a better balanced agriculture than it had in the twenties and it is unlikely that it would return to its older pattern of crop production and economic condition even if all government controls and aids were to be removed. We have here a good example of what some might call "assisted laissez faire"—one which may have been well worth the 1.6 billion dollars spent on it.

Not all of the programs show any such constructive result. The wheat areas, for example, have made no comparable progress. They were, in fact, pushed back into their old pattern by the heavy and insistent demands of the war and postwar years. A major adjustment will be needed there. It is being delayed and hampered by the very type of program that proved so significant in southern agriculture, particularly by the very severe distortion of prices imposed by the legislation now in effect. A price premium is being placed on the retention of the old pattern rather than on adjustment to a new one.

I shall not attempt to explore or even comment on many of the facets of the complex problem here under discussion. Such conclusions as are warranted must be very broad and general. On the major problem posed by the makers of this program, I think it is fair to say that in most lines the competitiveness of agriculture has not been reduced, except for short periods and then only to a moderate extent. The great upsurge in agricultural production and prosperity of the forties was in the main a normal competitive reaction related to a very abnormal demand situation. Government restrictions either before or during that period had very little to do with it. Price guarantees, that is, the assumption by government of some of the price risk, probably were a stimulating factor. When greater production is desired, that is a point to keep in mind. When production is overabundant, such price guarantees may, of course, operate to inhibit needed adjustments. It is here that government intervention of a different kind may be helpful and justified. This implies that the major usefulness of such devices is in times of depression, not in times of high demand.

It is of interest to note that, in times when production expansion is needed, the very competitive, American type of agricultural organization appears to be much more responsive than the authoritarian structure which prevails in some of the European countries. All of the Iron Curtain countries seem to be experiencing great difficulty in achieving the volume of agricultural production needed. If a reduction of output is desired, they, of course, have an advantage over us. Their methods of removing unwanted production and unwanted producers are far more effective than ours.

# COMPETITION IN AGRICULTURE: FACT OR FICTION

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I am not going to try to distinguish between fact and fiction, at least as related to competition. I assume that the interest of economists in the existence or absence of competition is primarily an interest with a welfare orientation. In other words, our interest is in the effect that the organization of an industry has upon the allocation of resources and the distribution of income. The assumption that competition is preferable to other means of organizing an area of economic activity is primarily a preference for the consequences that are supposed to follow from competition, not merely a preference for competition per se.

But the consequences that are supposed to flow from competition do not necessarily occur, if we define competition in terms of the inability of any one firm to influence the price at which it buys or sells. A satisfactory allocation of resources requires more than competition, as defined above. It requires as a minimum access to knowledge about alternatives. If such knowledge is lacking or can be acquired only at high cost, competition will not lead to an allocation of resources that maximizes national income for any given distribution of income.

The question to which I wish to address myself is the following: Have the events and policies of the past quarter-century, as these have affected agriculture, resulted in a less efficient use of farm resources than existed in the late twenties? Obviously I cannot give an unqualified answer to this question; the kinds of measures that I have at my command do not permit me to do so. But it does seem possible to form certain judgments that may have a degree of validity.

In the late twenties there were far fewer apparent interferences with the markets for factors and products than is true today. But some kinds of interferences did exist; there were import duties on a large number of farm products, dairy producers bargained collectively in some fluid milk markets, and in that distant land called California, the citrus producers were not entirely ignorant of the possible gains from monopoly. Thus even in the twenties, there was not complete freedom to sell in the U.S. markets, the principal limitation probably being the import duties. The reference to import duties is important. For a commodity which is substantially on an import basis, such as sugar, you can accomplish as much through the judicious use of import duties as you can with a price support program. To do so requires flexibility

in modifying the import duties if you wish to achieve a specific price to the domestic producer, but even in the absence of varying import duties, the degree of protection afforded by import duties and by support prices need not differ over a period of time. It may be noted in passing that since 1948 the sugar program has functioned primarily through control of imports though aided by payment to producers of the proceeds from a tax on processed sugar, but without any attempt to limit domestic production by direct controls on farmers.

But accepting the view that there were fewer interferences with the operation of markets a quarter-century ago than now, does this mean that a measure of resource efficiency necessarily would be at a lower level now than then? Such a conclusion seems unwarranted. It needs to be recognized that some interferences with the market may improve the use of resources, given the particular situation from which one starts. For example, in a two-commodiy system, if there is 10 per cent excise tax on $X$, the imposition of a similar tax on $Y$ may result in everyone being made better off than before. It may be noted also that in some situations an export subsidy may serve to improve resource allocation if other sectors of the economy with which the producing group competes for certain resources receive import protection.

## I

Professor Benedict has provided an excellent summary of the many programs that have been enacted in the agricultural field since 1929. I shall not, at this time, deal with any of the specific programs but will, instead, look at certain gross changes in agriculture that are related to the allocation of agricultural resources. I must note that one cannot be certain what these changes may mean as an indication of a change in competition. But, nevertheless, let us look at certain ratios of output to input, comparing 1949-53 to 1925-29.

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|---|---|
| Output per man-hour | 1.93 |
| Crop production per acre | 1.28 |
| Production per animal unit | 1.28 |
| Output per unit of all inputs | 1.39 |

During the same period, farm output increased by 46 per cent. These data do not give an indication of a stagnant, unchanging industry nor one in which governmental interference was used to place an effective upper limit upon output or to prevent changes in the inputs used. But these data do not tell us what would have happened to agricultural output if there had been no government farm programs during the period, nor do these data tell us much about economic efficiency in agriculture. The data indicate fairly rapid technological change and a much more

rapid reduction in the ratio of labor to output. As will be noted below, the decline in importance of labor is consistent with improving resource use.

On the whole, it seems a correct conclusion that the price support and subsidy programs increased farm output during the period under consideration. With the exception of tobacco, attempts to regulate agricultural production were important only in 1933, 1934, 1937, 1938, 1939, 1940, 1941, and 1950. Thus in only eight of the last twenty-one years has output restriction been an important objective for the major agricultural crops (excluding tobacco). But acreage restrictions, which are at best a relatively ineffective means of restricting output,[1] have been accompanied by positive incentives to increase output. In the years 1933 through 1952, the sum of direct payments to producers was 9.4 billion dollars. These payments were of various sorts: rental and benefit, soil conservation, price adjustment, parity, Sugar Act, and some production programs during World War II.

In addition, the existence of price supports at relatively profitable levels acts as an inducement to produce even when market prices have been above support levels, as has been true much of the time since 1941. These influences plus the spread of production techniques coincident with the soil conservation program plus the incentives to try out land-saving methods whenever the land input has been restricted have undoubtedly had an expanding rather than a restrictive effect.

It is true, of course, from an efficiency standpoint, it is just as serious to produce "too much" as it is to produce too little. Have these programs encouraged too much production? That on occasion more has been produced than could be sold at the support prices cannot be questioned.

Total price support costs, as borne by the taxpayer, are difficult to estimate. The Commodity Credit Corporation indicates that its losses on price support operations, through June 30, 1952, were 1,048 million dollars but this is only a part of the story. To this figure must be added 430 million dollars in export subsidy payments under the International Wheat Agreement, 1,261 millions of Section 32 funds, 260 millions for the Food Stamp Plan, and almost 600 millions for school lunch programs over and above Section 32 funds so used. As a very rough approximation, it can be said that losses from price support operations and domestic distribution programs have been 2,700 million dollars while export subsidies have approached 800 million. I do not wish to imply that the approximately 800 million dollars spent by the federal government on the School Lunch Program should all be counted as a

[1] See T. W. Schultz, *Production and Welfare of Agriculture* (Macmillan, 1949), pp. 140-161.

part of the cost of the price support program. Though the program was started as a measure to expand the demand for food, it is quite likely that subsidized school lunches would be continued even if it no longer had the active support of farm groups.

It should be noted that the Commodity Credit Corporation treats interest costs with the same apparent abandon common to all U.S. agencies. Though the Commodity Credit Corporation pays a nominal interest charge (apparently somewhat less than 2 per cent) for money borrowed from the Treasury, even this charge is not included in the above estimate of costs of price support operations. General administrative expenses are excluded also. The Commodity Credit Corporation has been aided and abetted by various foreign aid programs, particularly in disposing of its cotton holdings following World War II. In fact, aided by inflation, war, Section 32 funds, and foreign aid programs, plus a blissful ignorance of the mysteries of interest, the Commodity Credit Corporation realized a net gain in its cotton storage operations through mid-1952.

What costs to consumers have been can only be guessed at. Some consumers have gained, of course—the recipients under the Food Stamp Plan, the School Lunch Plan, and certain relief and welfare cases. Others have gained from some of the two-price plans that have been in effect from time to time. Let us consider the domestic and export operations separately and roughly attempt to indicate their effect upon consumer expenditures for farm products at the farm level. An analysis of this issue rests upon certain presumptions about the demand and supply functions. The maximum transfer from consumers to farmers would occur if the supply were perfectly inelastic. Except in the case of the potato program, which resulted in destruction of output and a government cost of 584 million dollars, the assumption does not seem too unrealistic as a rough approximation. In what follows I will ignore the potato fiasco. Again, in order to indicate a maximum effect, it will be assumed that the demand elasticity of those who received the lower cost products was unity and that the proportion of total output affected was equal to the ratio between cost and the gross receipts from farm production minus interfarm sales. This proportion is 0.007.[2] If the price elasticity of demand at the farm level is 0.25, this would mean that consumers who did not gain from the programs would have paid approximately 2.8 per cent more for their farm products than if there had been no program, assuming a zero price elasticity of supply.[3] If

[2] For the calendar years 1933 through 1952, gross receipts from farm production was 328.4 billion dollars and the costs of domestic distribution programs (excluding potatoes) was 2.1 billion dollars for July 1, 1933, through June 30, 1952, to which was added a small amount estimated to include the costs for all of 1952.

[3] No attempt has been made to deflate the export or subsidy expenditures or to treat commodities separately, as should be done in a reasonably refined analysis.

one makes the same assumptions about the export subsidies, the increase in domestic expenditure for farm products was approximately 0.8 per cent. This gives a total of 3.6 per cent or about 12 billion dollars over the twenty-year period. But this estimate seems to me to be extreme in assuming a zero price elasticity of supply and so large a difference in the price elasticities in the high- and low-price markets. In fact, the bulk of the CCC direct losses (over 40 per cent of the total for domestic and export programs) involved resales in the general domestic market, but at a later time than when purchased. These sales probably did not increase consumer expenditures and may have in fact reduced the aggregate amount.

But against the price support losses and the impact of the export subsidy program must be offset any increases in productive efficiency that may have occurred as a result of the price support and associated programs. If farmers produced only 1 per cent more during the period from a given volume of resources than they would have in the absence of the programs, the maximum consumer cost of the domestic and export subsidy program would have been nearly zero.[4] If the increased output were of the order of 2 per cent, the cost to taxpayers would have been fully met, even including interest costs, the almost 10 billion dollars of direct subsidies paid to farmers, and the maximum consumer cost would all have been covered.

None of the illustrative figures in the two previous paragraphs are intended to indicate more than rough orders of magnitudes. Yet I believe these materials at least indicate the possibility that the inducements to adopt more efficient methods of production could have offset all of the income transfers involved in the price support and direct subsidy operations. The gains to consumers from more rapid technical change would not have been realized, of course, if output had been effectively controlled. But there is no evidence (with the exception of tobacco) that output was effectively controlled. Much of the time no control was attempted and even where attempted the techniques were not particularly effective.

## II

Labor is the most important resource used in agriculture: the contribution of labor to gross farm output is roughly twice that of land and is equal to all inputs purchased from nonagriculture. The effect of any interferences or restrictions on the use of land could be more than offset by actions that would improve the use of labor. It is true—I believe all too true—that the agricultural programs have not been designed to

[4] The crucial assumption at this point is the price elasticity of demand at the farm level. I have assumed it to be 0.25 as used in the estimate of maximum consumer cost. Since I have used the same price elasticity in both cases, its absolute value is of little significance.

facilitate effectively the movement of labor from agriculture to nonagriculture. But other changes in our economy—particularly thirteen years of continuous full employment plus improved means of communication and transportation—have greatly increased the mobility of the farm population. Farm employment declined by about one million from 1929 through 1940 and by about three million since the latter date. Furthermore, the percentage of the farm labor force in the southern states declined from 53 in 1929 to 50.5 in 1940 and to 47 in 1952. In other words, employment declined more in the relatively low farm income states than in the higher income areas. Even though the net effect of the farm programs may have been to have retained some labor in agriculture that might have moved out—particularly in the tobacco areas—other influences were sufficiently strong to create both a downward adjustment in farm employment and in important degree of regional readjustment.

Even though the labor movement has been in the appropriate direction, it is evident that a further transfer of labor out of agriculture is required in areas employing about one-half of all farm labor before returns to farm labor will equal those for comparable nonfarm labor. And it is also true, despite the greater reduction in farm employment in the South than in the non-South, there has not been a relative improvement in labor returns in southern agriculture compared to the rest of the nation's agriculture. However, there has been a general rise in farm labor incomes compared to nonfarm and southern agriculture has shared in this improvement.

## III

In the previous pages I have tried to indicate that in some broad overall sense the general efficiency with which agricultural resources have been used has not diminished in the past quarter-century and has probably changed in a favorable fashion. It has been stated—though certainly not proven—that the existence of price supports, even where not effective, has encouraged greater technological change than would otherwise have occurred. Since these changes have been profitable, they have constituted an improvement in efficiency. In addition, much of the income transfer to agriculture through various subsidies has encouraged investments that were profitable in any case, but not made because of inadequate savings and credit.

But I would be creating an unrealistic picture if I did not make some comments about certain particular situations. With the exception of potatoes, eggs, and dried milk, the price support levels from 1933 through 1951 did not in fact tend to overestimate significantly the

market value of farm products. Admittedly, this is an ex post facto evaluation and the gods of war have on two different occasions made virtue out of price support results that might very well have created very uncomfortable situations, indeed.

Even so, price support programs have had influences on resource efficiency that have been undesirable. The networks of trade restrictive devices have been expanded and we have occasionally engaged in predatory dumping exercises.

If one attempts to look ahead a few years and is willing to run a large risk of being wrong, there are a number of disquieting elements in the picture, particularly with reference to cotton, wheat, and dairy products. These three groups of commodities represent a significant share of total agricultural output—the first two now using more than a quarter of all cropland (in terms of acres, not value) and the latter creating about a seventh of total farm cash receipts.

It is estimated that by next August the cotton carry-over will equal about 9,500,000 bales. Acreage controls and marketing quotas will be imposed on the 1954 crop. If the recently announced state distribution of allotments is put into effect and were to remain in effect for a number of years, the shift in cotton production that has been occurring in recent years would be halted and, in fact, reversed. The allotments, which are based on acreages planted in 1947, 1948, 1950, 1951, and 1952, provide for a national reduction in acreage of 27 per cent, but the reduction in California would be 50 per cent, in New Mexico, 45 per cent, and in Arizona, 55 per cent. Thus the states which have been experiencing favorable cost-price relations in recent years will be forced to cut acreages much more than states with a downward trend in acreage. If acreage allotments are used continuously, shifts in areas of production can be made only by political processes—a process that will usually exhibit a pronounced lag.

In the case of cotton, it appears that our present apparent difficulties are due to a specific consequence of our price support policy; namely, that the U.S. is holding a much larger proportion of only a slightly larger world carry-over of cotton. The carry-over of foreign growths did not change from August, 1952, to the same date in 1953, and stocks of American growths in foreign hands actually declined by a half-million bales. But U.S. stocks of domestic cotton doubled (an increase of 2,700,000 bales). The reason is clearly indicated by a statement in the 1954 Outlook issue of the *Cotton Situation:* "As during the past season, prices for foreign growths are lower than comparable qualities of American upland cotton. . . . Because of this price relationship, importing countries are expected to use the United States as a residual supplier

of cotton. . . ." This statement would also have been correct if it were in the past tense. As in the past on several occasions, the U.S. is providing an umbrella for foreign cotton producers.

The prospective wheat situation may portend a more serious misallocation of resources than cotton. Not only has U.S. wheat in contrast to cotton received a large subsidy relative to world market prices in recent years but the over-all stock position of wheat in the four major wheat export nations indicates the necessity of generally lower prices and smaller production. The wheat price support program since 1949 has not encouraged American wheat producers to make adjustments in a gradual manner. Here is an instance, I believe, in which the present program has failed in a serious way to reflect the basic competitive situation of American wheat.

The various programs that affect the dairy products are definitely limiting certain competitive adjustments that would otherwise occur. Price supports for cheese, butter, and dried milk have resulted in government stocks equal to from 20 to 40 per cent of a year's output of these commodities. There is no presumption that these stocks can be moved, except at a considerable loss, and stocks will continue to accumulate at present support prices. The federal and state fluid milk marketing orders and controls have contributed substantially to the price and stock situation in cheese, butter, and dry skim milk. Since the price of fluid milk in many markets is based on a formula that includes the price of manufactured milk, producers of fluid milk have been advocates of high supports for the manufactured products. But perhaps even more important, the controls on prices of fluid milk have sheltered fluid milk distributors from certain competitive forces. Prior to the orders and controls, a new distributor could establish himself by purchasing milk from farmers at approximately the blend or average price and selling most or all of his supplies for fluid purposes. Distributors no longer face this type of competition and it seems probable that cost conditions in fluid milk markets now reflect the absence of this incentive to greater efficiency.

## IV

It cannot be said that up until the present the farm programs have seriously impeded the major competitive adjustments in American agriculture. In part this is due to the relatively limited application of the more stringent of the controls; in part, two wars and inflation have rescued agriculture from highly unstable situations. But it must be said in addition that certain positive incentives have operated to speed the adoption of technological change and that on balance farm products have been relatively cheaper during the recent past than might have

been the case if these programs had not been in operation. Until the year 1953, viewed *ex post,* it cannot be argued that the support and other programs have resulted in retaining too many resources in agriculture and in inducing an output substantially in excess of market demands at the prevailing prices. Some mistakes have occurred, true, but these mistakes must be considered in the proper perspective and weighed against possible gains.

My relatively favorable appraisal of the operation of farm programs from 1930 through 1952 should not leave the impression that these programs have been ideal or the best that could be devised. In large part, the favorable consequences have been the result of accidents or events that could not be foreseen, and in a less troubled world the current appraisal might have been very different. The programs do indicate that gains in efficiency in allocation of resources can be achieved if price uncertainty is reduced. But there are other methods of reducing price uncertainty than those embodied in the present programs and some of the methods have less danger of leading to misallocation of resources.

In raising serious doubts about the restrictions of competitive adjustments that now seem to be on the horizon, I may be wrong again as I was in 1939 and in 1949. It is possible that another war and inflation will again make virtue out of unplanned stock accumulations and will make 90 per cent of parity appear to be low rather than high. But even if this be true, there is merit in considering other means of reducing price uncertainty. And in addition, there is merit in actually formulating a storage program rather than in allowing stocks to accumulate or to be used as an accidental attribute of the present price support program.

## DISCUSSION

GLENN L. JOHNSON: In the two fine papers on the competitive and monopolistic aspects of our farm programs, Professor Benedict has tended to concentrate upon the history of agricultural policy with special emphasis on attempts to restrict competition while Professor D. Gale Johnson has made a commendable attempt to ascertain some of the quantitative impacts of federally sponsored farm programs on the competitive structure of agriculture.

The first point which I want to bring out is that most of the agricultural programs have involved distribution or redistribution of income and assets (both tangible and nontangible) between farm and nonfarm groups and, in some instances, among farm people. The parity idea, so basic in agricultural policy, is a device for evaluating income distributions. This is directly evident in the case of the income parity concept and indirectly evident in the case of the price parity concept. In addition to agricultural price support programs, there is the long record of governmental aid in the production and distribution of education, research, regulation, transportation, electrical and irrigation services. These services have been established in view of both parity or equity and efficiency considerations. The same can be said of the agricultural credit agencies, including the Farm Security Administration and its predecessor and successor agencies, programs for the improvement of the diets of low-income people, relief and the river development programs. Even the federal development of monopolistic power in agriculture can be regarded from a parity or equity standpoint. For instance, Professor Benedict pointed out that the attempt to equalize the distribution of monopolistic power between farm and nonfarm groups through the development of monopolistic power within agriculture followed an earlier attempt, on the part of agriculturalists, to achieve the same end through restriction of monopolistic operations on the part of nonfarm groups. Thus it is rather clear that a major portion of the agricultural programs have been based upon concepts of how income and certain assets (both tangible and nontangible) ought to be distributed between the agricultural and the nonagricultural sectors or within the agricultural sector.

When Professor Johnson picked up the discussion, he assumed that the interest of economists in the existence of competition is primarily a welfare one. Within this assumption he addressed himself to the following question: "Have the events and policies of the past quarter-century, as these have affected agriculture, resulted in a less efficient use of farm resources than existed in the late twenties?" When he applied such efficiency tests as output per man-hour, crop production per acre, production per animal unit, and output per unit of all inputs, he found that efficiency, so measured, continued to increase with the government programs in effect.

Professor Johnson did not stop with efficiency measures. Instead, he went on to try to answer questions about how the programs have changed general welfare. Professor Johnson's efficiency measures are "indicators" of the com-

monly used welfare indicators. These welfare indicators are meaningful only within a given pattern of asset ownership unless the compensation principle is applicable. As many of the farm programs under consideration have changes in the asset ownership pattern as major operating objectives, Professor Johnson had to use the compensation principle. He applied the principle and the coarse data available on possible increases in production from adoption of more efficient production methods and reductions in price instability led him guardedly to conclude that general welfare has increased.

I believe it is important for us to keep in mind that welfare may be increased when compensation is impossible and/or when the welfare indicators do not move positively. Our speakers realized this. At least they appear to have gone beyond welfare economics which, in and of itself, is not capable of determining whether one pattern of asset ownership is preferable to another pattern of asset ownership or whether attainment of one set of goals is preferable to attainment of another. Such evaluations or choices come from the depths of philosophy and theology. Philosophically, our speakers seem to feel that the asset ownership pattern which has resulted from the farm programs is as good as that existing prior to the programs. In the case of the Cotton South, they feel it is better. Further, they appear to feel that the public was generally satisfied with these changes. These considerations along with increases in the efficiency measures and compensation possibilities support the general conclusion that welfare has increased under the program, whether or not we can say as a result of the programs.

Our speakers also realize that changes in the distribution of income and assets are not necessarily contrary to competitive free enterprise economics. In some cases such changes have little to do with economics. In other cases, free competitive economics can best survive when the asset ownership pattern which evolves from its operation is modified from time to time in accordance with fundamental concepts held by both individuals and groups as to the "proper" nature of the asset ownership pattern. Our system has numerous peaceful, systematic ways of modifying asset ownership patterns. As examples, we can consider public education, our income tax structure, our inheritance taxes, relief structure, the farm credit structure, agricultural extension service, TVA, our public roads, and public parks. Static, competitive, free enterprise, economic theory is poor at explaining asset ownership patterns. It tends to assume them.

It is also important to note that some programs are set up which try to attain goals through interfering with the operation of the competitive economy. Such programs endanger the free enterprise system and its ability to allocate efficiently production and consumption. At several points the competitive nature of American agriculture has been in danger in the sense that the competitive system itself was threatened by the operation of federally sponsored, monopolistic farm programs. From 1933 to 1936, cotton, tobacco, and hog production were rather severely controlled. After this period was terminated by the Hoosac-Mills decision, it was followed by a period of relaxation extending from 1936 through 1938 during which time controls were in existence which were capable (had they been stringently applied) of pre-

venting competitive allocation of production by free prices. With the reformulation of control legislation in 1938, another period was inaugurated, lasting until the beginning of the war. In this period most of the controls on production and prices were not administered closely enough to prevent the competitive forces of economy from producing stocks in excess of consumption. In this period, interference with the competitive system existed but it did not bring about major alterations. During the forties competitive forces were as dominant in farming as in industry though, of course, competitive price allocation was seriously interfered with in both sectors in the interests of the war effort. In the postwar period, demand has been generally strong except for potatoes, wheat, dairy products, tobacco, and cotton in certain years. Hence the farm control programs have stood primarily as an expression of a politically acceptable price and income pattern. Despite their passivity the programs also stand as a current threat to competitive price allocation in agriculture. The competitive system becomes an end in itself largely because of its efficiency in reflecting noncoerced consumer choices to producers as a basis for resource allocation. Like other ends, the end of maintaining the competitive system is relative. Policy and lawmakers have regarded it as such. They at times have sacrificed large segments of the competitive system in order to attain the ends of war, the ends of labor, and the ends of nonfarm businessmen.

In my opinion, one of the better discussions of the relativity of ends and values in agricultural policy is Dale Hathaway's article on "Agricultural Policy and Farmer's Freedom" in the November, 1953, issue of the *Journal of Farm Economics*. Professor Frank H. Knight, in his Presidential Address to the American Economic Association in 1950, rather nicely stated the problem facing both farm and nonfarm economic policy makers. "No doubt," he wrote, "we all agree that extremes of wealth and poverty are unjust, especially when they do not correspond with personal effort or sacrifice—and are bad in other ways. The question is, what can we do about it? Can the rules of the economic game be so changed that the winnings, symbolic and real . . . will better accord with some accepted or defensible criterion of justice? And can it be done without wrecking the game itself, as a game, and as a producer of the fruits on which we all live? The intricate conflict of values cannot be spelled out in detail—freedom with order, efficiency and progress, interesting activity but especially freedom versus justice." I believe that additional discussion of the relativity of the ends in agricultural policy would have materially improved our two papers. For instance, I am interested in hearing discussions of whether the "game" has been ruined by replacing "self-improvement" with government distribution or whether it has been improved by making the objective of self-improvement attainable for a larger proportion of the farm population.

Our speakers have shown us when the competitive system has been threatened and when objectives not in conflict with that competitive system have been involved. Both speakers noted that we have come out as well as we have, thus far, because of unforeseen circumstances. Professor Johnson has also asked us to consider alternative programs—mainly storage programs—presumably forward prices, as a way of attaining objectives involving income and asset ownership distributions with a minimum of interference with the competi-

tive system. A general over-all conclusion of these sessions is that much of our farm program is concerned with equity concepts involving asset and income distribution, not with the modification of the competitive system, but that we need to be careful that the competitive system is not wrecked in pursuit of these other objectives.

H. B. JAMES: Professor Benedict has provided us with an excellent summary of government programs affecting agriculture since 1929. He has concerned himself "with the question of whether, by adopting monopoly techniques, they [farmers] have in fact been able to improve their situation and whether the programs adopted have in fact reduced materially the competitiveness of American agriculture." He concludes that the situation has been modified in at least three ways as compared to an income distribution based on unregulated competition. First, the amounts of farm commodities put on the market have been influenced and prices have been affected, not only as a result of changes in supply, but also in other ways as well. Second, there have been sizable transfers of income both from the Treasury to farmers and from consumers to farmers. Third, there has been, at times, heavy assumption of risk by the government which, because of fortuitous circumstances, did not result in the heavy losses that might well have been anticipated.

Professor Johnson takes a different approach and concerns himself with resource allocation and the distribution of income and not with competition per se. He recognizes that some interference with the market may improve the use of resources. He indicates that the price support and subsidy programs in the aggregate have increased farm output during the past two decades. He further indicates that, on balance, over the two decades these programs have not been expensive to consumers through higher prices or payments from the Treasury. He believes that inducements to adopt more efficient methods of production could have offset all of the income transfers involved in the price support and direct subsidy operations.

In regard to the income transfer effects of the various programs, there appears to be a little conflict between Professor Benedict and Professor Johnson. I think this is due primarily to the fact that Johnson is looking at the over-all effects of all the programs over a period of two decades, whereas Benedict is looking at specific programs over shorter periods of time.

I agree with Johnson that, up until the present, the farm programs have not seriously impeded the major competitive adjustments in American agriculture. This has been due in part to the lack of stringent controls and the effects of two wars and inflation. Programs have provided positive incentives to speed the adoption of technological change, and in this way they have tended to lower the cost of farm products to consumers. This is not to say that mistakes have not been made; neither is it intended as an indorsement of all past programs for future use.

Professor Benedict's point in regard to the change in attitude of farm people toward competition and monopoly deserves emphasis. He has pointed out that, historically, farmers have been staunch supporters of competition and have opposed monopoly in agriculture as well as in other segments of our

economy, but that in the past two decades farmers have had a change of heart and are now willing to use principles of monopoly to improve their own position as a group.

Both Benedict and Johnson have recognized such programs as research, extension, and credit as having influenced agricultural output without interfering with the competitive process. In fact, these programs may have tended to increase competition.

I would say that farm programs have fared well in the hands of Benedict and Johnson and, although neither has answered specifically the questions inherent in his topic, each has presented an excellent paper. I am sure neither of them meant to imply by his favorable treatment of his subject that tremendous improvements in agricultural programs are not needed. The characteristics of demand and supply of agricultural commodities are such that extremely wide price variations are likely to occur when free market forces are allowed to operate uninterrupted. Extreme price variability and uncertainty do not promote efficient production. I would agree with Johnson that competition per se is not the goal, but that our interest is in the allocation of resources and the distribution of income. Society determines its goals and the means of attaining these goals. On the basis of the change in attitudes during the last two decades, it appears that the public, in the future, will interfere with competition in agriculture in an effort to influence the distribution of income and the allocation of resources.

Five points already touched upon need additional emphasis. First, competition other than price competition should not be overlooked. Second, the effects of agricultural programs upon the efficiency of the information process are important. Price support and action programs, in addition to educational programs, tend to speed up the rate of technological change. Third, output has increased considerably during the last two decades, and, as Johnson has shown, this increase has been associated with agricultural programs. Fourth, labor resources have been transferred out of agriculture. In many cases, this transfer has been associated with attempts to restrict production. Fifth, per capita consumption of agricultural commodities has remained high. Whether cost to consumers, including cost of programs, is more than it would have been without the programs is not known. But to the extent that programs have induced technical progress and increased efficiency, there has been a tendency to reduce cost.

The pertinent question for the future is: Will programs be developed and accepted which will stimulate technological change, reduce price uncertainty, and allocate resources more efficiently? Benedict does not hazard a guess on this point. Johnson raises some serious doubts about the restrictions of competitive adjustments that now seem to be on the horizon. Personally, I think that the people of the United States, especially the farm people, are giving more serious thought to questions of farm policy than ever before in our history and that improvements in agricultural programs will be made. Perhaps within the next few weeks we shall get some idea as to how long we shall have to wait for any major improvements.

# INDUSTRIAL PRICING

## Institutional Practices Versus Abstract Models

# TOWARD A THEORY OF INDUSTRIAL MARKETS AND PRICES

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Generalizing about markets and price formation in the industrial sector, where fewness of participants and differentiation are usual attributes, is a complex task which requires one to draw on price theory, on the empirical research of the past twenty years, and on his own observations and hunches. Few parts of the conclusions reached are beyond the hypothesis stage. When, however, hypotheses about each of the various facets of the problem are woven together, the outline of a theory emerges which appears useful in explaining the operation of industrial markets and in prognosticating their behavior.

Theory in this area must be directed toward exactly the same problems as those to which neoclassical price theory has been addressed, but explanation of industrial markets proceeding inductively from empirical evidence is often held to higher standards than is the deductive theory of prices. Both approaches must identify the variables that are relevant for a given problem. Both must demonstrate the net results of the interaction of these variables under various assumptions as to their magnitudes and the extent to which these results would accord with established tests for optimal use of resources. Price theory, however, stops with this and in so doing serves essentially as a computing machine into which data can be put and conclusions ground out. But those generalizing in the area under discussion are usually expected to indicate the actual empirical content of the variables as far as that is possible.

### *Requirements for an Adequate Theory*

Several requirements for an adequate theory of industrial markets and prices can be set down. Even for a static theory, it is not possible to build the analysis on given utility and technological functions, as is done for competitive and monopolistic price theory.[1] To varying degrees, the demand and supply functions in markets that lie in the zone intermediate between the structurally competitive and the monopolistic

[1] This point has been most fully expounded by William Fellner in his *Competition Among the Few* (Knopf, 1949), pp. 8-13.

are themselves results of market processes and must be explained. Added to the difficulties of static theorizing in this area is the need for dynamic analysis and for broadening the variables considered—all of which points to the following requirements for a satisfactory theory:

1. A satisfactory theory must be historically related in the sense that technological, organizational, and public policy influences of a certain economy at a certain period are assumed. Here we refer to the present-day American economy, where the public policy is designed to keep cartel arrangements so weak that group control over important market variables is not significant for long.

2. Ideally, the theory should be able to explain why the market is as it is, because structure does not necessarily emanate from technological and utility functions.

3. A satisfactory theory must often be dynamic because market structure is potentially variable and because the technology actually used and many other of the diverse forms of interfirm rivalry are optional. Those selected may set in motion a chain of reactions throughout the industry.

4. A satisfactory theory must go beyond explaining the cost-price output relations for a given product and must be prepared to appraise the conditions of choice among other variables and the economic results of that choice. This requirement, like the others set forth here, is not introduced for the sake of descriptive realism but because it is essential for better prediction.

One general feature of all of these requirements is that in the search for uniformities one must not abstract from diversities that are relevant to the behavior to be explained. Whether narrow or broad-gauge theory is sought, it is obvious that definitive theory which meets the above specifications cannot be laid down at this time.

### *The Outline of the Argument*

An advance sketch of the general line of argument and some of the assumptions on which it is based will place each of the later sections in better focus.

1. This is not an attempt to theorize about firms in general but rather about markets and collections of firms that constitute industries which have certain characteristics. (The delimitation of an industry or a market will always be relative to the context in which these terms appear.)

2. The industry or market is looked at in midstream. Its structure is not traced back to ultimates or examined as if it were being established *do novo*.

3. The emphasis is on the various factors that influence the structure

of the market and on the effect of the structure in turn on the market's operation. Relevant, therefore, are such basic conditions as the nature of final buyer demand and the technology available for production. But final buyer demand, as it bears on the manufacturer, may be altered by the organization of the intermediate handlers or processors. Various sellers undertake to satisfy different, or several different, segments of the spectrum of consumer wants in a particular area, or to deal in a different fashion with the distributive trades, or even to take on one or more aspects of the distributive process. Within the same industry there are various degrees to which the whole manufacturing process is carried out by an integrated ownership rather than by several ownerships coordinated through purchase and sale.

4. Both because of the ubiquity of diversity within markets and because of the analytical usefulness of that characteristic, we shall first consider the apparently complex cases in which diversity among firms plays an important role. Cases in which such diversity is not significant will be treated secondarily.

5. Markets for most products (broadly conceived) tend to settle into segments among which there are varying degrees of elasticity of substitution and of intersegment mobility. Often the same firm will be doing business in more than one segment.

6. Much of the analysis—probably the most important parts of it—should be directed toward the composite of industry segments, and for this we use the term "product line."

The general argument of the following sections, which reflects the views just listed, is divided into the following parts:

First, it is explained that by a historical process a state of balance is achieved in industrial markets and this balance[2] is not easily disturbed. Both the process of reaching a balance and its stability result from the diversity among firms each of which settles into one or more places in the loosely conceived market. Second, the economic attributes of this balance—the degree to which it is optimal—is abstracted from actual (but not from potential) variations in factor prices and industry demand. Economic results are found to emanate from entry and from the various forms of rivalry, choice among which reflects the structure of the market and the presence of uncertainty. Third, the degree and method of adaptation to factor price and demand movements are considered next with particular reference to whether external developments threaten to disturb the internal balance. Finally, an appraisal of the forms and promptness of adaptation and of the economic character

[2] Parenthetically, it should be observed that the term "equilibrium" is not used very often in the following pages even though by "balance" is meant a situation such that no one who has the power to change the situation wants to do so.

of states of balance in industrial markets is made insofar as available evidence and space permit.

Because of limitations of space, no attempt will be made to show how the ideas advanced incorporate or differ from either deductive price theory or observations which have been made on the basis of empirical research. Few references will be made to the literature, much of which, it can be observed, stresses the noncompetitive performance of industrial markets. This omission gives an appearance of bias to the empirical evidence cited, but that risk must be run.

### *The Balance Tendency of Industrial Markets*

Economic analysis depends heavily on discovering equilibrium tendencies which reflect a sufficient balance of forces that economic processes become orderly. The literature on markets where sellers are few and particularly where, in addition, a high proportion of costs are fixed in the short run, has been concerned with whether equilibria can either be determinate or be stable in the absence of collusion. Yet one observes that few such markets seem disorderly in the absence of evidence of collusion—a fact which is explained by the following arguments.

*The Process by Which Balance Is Established.* The structure of a market at a given time reflects an evolutionary process whereby firms come to acquire a workable relationship with one another. They are assisted in this process by the fact that most markets are made up of niches. The respective firms find one or more places for themselves by design or luck.

It is in connection with the adaptation of the firm to its environment that uniquely farseeing or unwise business decisions have their major influence. Once such decisions have been made (whether by accident or careful design), they set for some time the conditions under which shorter term operating decisions will be made. Definitive conclusions are not possible as to the extent to which firms, autonomously, shape the varied attributes of the market structure, short, of course, of cases of market dominance. My own inclination is toward stressing the firm as consciously adapting to its environment or as being "adopted"[3] when its successful moves are accidentally good.

Regardless of one's views on this controversial subject, it seems evident that a balance can be achieved among such forces as the desire for variety within a product area and the attendant services, the roles of various firms in supplying them, and relative prices. Such a balance is more multivariate than is one of prices and outputs.

[3] A. A. Alchian's terminology from his "Uncertainty, Evolution, and Economic Theory," *Journal of Political Economy*, June, 1950, p. 214.

The relative importance of these variables differs with the group of products handled by the industry, but the historical tendency has been for the diversity of feasible roles for various participants in a market to increase. This has been true not only of consumer goods industries, as incomes have risen, but even of semimanufactured goods. Today finished goods manufacturers rarely start with crude materials but use semimanufactured materials previously processed to fit their methods of manufacture.

The evolutionary process does not work toward a balance in the pure oligopoly case, particularly where there are the added features of a low ratio of short-term marginal costs to total costs and a lack of opportunity to use product quality as a variable. In such cases, either overt collusion or effective, tacit price leadership is apt to develop or the firms will integrate vertically into a stage in which the diversity required for stability does exist. In most markets, however, a balance is feasible without collusion, and, in such a balance, margins between direct costs and prices differ among sellers, among brands of or channels of sale by the same seller, and among physical variations of the product.

*The Stability of the Balance.* The characteristics of the environment which shape the market's evolution also govern its stability. The fact that firms occupy somewhat different places in the market means that not all of them are in complete and direct competition with each other. But it also means that they cannot ignore or isolate themselves from one another, for their products are fairly close substitutes for each other and the analogous character of their production and selling operations facilitates entry into each others' backyards. There remains, however, a zone within which they need not fear upsetting action by rivals.

One reason for this is that at a given time each firm's freedom of action is limited by its history. The degree to which this is true depends on the adaptability of equipment, of personnel, of internal organization, and of relations with suppliers and customers. Usually, these inhibit quick, sizable changes in the character of the business. These fundamental characteristics of the firm also reflect its longer term goals, and temporary deviation from these goals is usually unwise.

This last point leads me to emphasize that each participant acquires not merely a place in the market but also a position which is a major long-term attribute. By market position is meant more than what the firm sells and to whom and by what means, and more than its share of the volume. Instead, market position is that composite of attributes which governs the ability of the firm to compete. Obviously, the relative importance of elements in this composite differs among product areas and even among firms participating in the same product area. The relevant attributes of competitive strength may also vary according to the prob-

lem. A vertically integrated firm, for example, may be strong for dealing with one type of problem and weak for another.

Business executives are cognizant of their respective firms' market positions and of what that enables them to do and of what acts are unwise. They realize that a strong market position is built slowly but can deteriorate rapidly. Above all, management recognizes good market position to be a valuable asset, whose long-term attributes must condition all short-term decisions. Its value is not merely defensive, as emphasis on security motivation suggests, but also is a basic attribute of the firm's ability to make positive moves; that is, to deal with unanticipated developments when they occur.

In that sense, market position becomes a means of long-term profit maximization under conditions of uncertainty. Consequently, the concept of market position is at the heart of the problem of the stability of industrial markets under given factor prices, industry demand, and basic technology because it governs the feasibility and effectiveness of various forms of rivalry.

This explains why changing prices relative to those of rivals is not a frequent source of disturbance of balance. If the balance has existed for long, presumably the relative prices of sellers (including the different prices in different segments of the market by one seller) are such that market shares are not shifted radically at the initiation of either buyers or sellers. Presumably such a balance is optimal to the various firms under the existing conditions.

Nevertheless, it is probably true that many firms could increase short-term profits by charging more, and perhaps even by charging less. The latter prospect is limited, however, not merely because of the expected reaction of rivals, but also by the fact that industrial and commercial buyers often give their regular suppliers an opportunity to match price cuts. That short-term opportunities to charge more are not seized reflects the fact that firms are guided by their long-term revenue curves which are much flatter than are the short-term ones. Indeed, vis-à-vis rivals who occupy similar market positions, a firm may look upon that curve as though it were horizontal at least at outputs less than those prevailing. That it is perfectly consistent for a firm whose capital has been committed to think in terms of its short-term marginal cost curve and its long-term revenue curve has recently been pointed out by Harrod.[4]

From the preceding argument emerges the conclusion that a change of price relative to that of the firm's rivals, that is, the disturbance of a balance by such a move, is appropriate only when the firm's market position is being changed correspondingly—a step which is not under-

[4] R. F. Harrod, *Economic Essays* (Harcourt, Brace, 1952), p. 150.

taken lightly. It is apt to succeed only when it is the result of a substantial program, carried out over a period of time, which may involve a modification of almost every phase of the business, including its physical plant. Consequently, changing prices relative to rivals tends to be part of a complex of almost continuous modification of product, package, sales channel, guarantees, free services, etc., which characterizes not merely the markets for most finished consumer goods but also for industrial equipment and many semimanufactured goods.

Less disturbing are forms of competition other than change of price relative to those of rivals, but the feasibility of these other competitive forms varies widely. Much advertising and other distributional effort is a means of standing still, not of moving forward. When used positively, devices other than price change do not often shift market shares rapidly. In part this is because their appeal to buyers is not so great and immediate as is a price cut. More typically, their lesser effect stems from the multiplicity and effectiveness of countering moves of rivals. Even trends in the strength of market positions, which are the result of competitive devices other than price, can be in operation for some time without setting off a price war. Consequently, there is nearly always some variation going on in the cost-price margins of particular firms or their market shares or the quality of their products, but not enough to disturb the fundamental balances of forces.

It is in such a context as that just sketched that the stability of a balance must be appraised. In general, the less the product and its market conforms to the specifications for a pure oligopoly (which really involves more relevant assumptions than fewness of sellers and standardization of product) the more likely it is that the important elements of the market positions of rivals will be such that they cannot be easily upset by feasible competitive devices. It seems to me that most markets are of the latter sort, and that short of some development which warrants a strenuous move by some participant, states of balance tend to be quite stable in the industrial sector of the economy. This does not mean a standstill, but rather an ability of industry to absorb many adjustments without open disruption.

### *Economic Attributes of Equilibrium*

While orderliness, or tendency toward an equilibrium, is an important aspect of a market, the efficiency and the income distribution aspects of that equilibrium have properly been the center of attention in price theory. As applied here, this requires appraisal of the degree of optimality of the balance achieved among the forces of product-quality, technology and cost, price, and output. In this section, we are not concerned with reactions to changes in general technology, consumer

preferences and incomes, or factor prices, but, it must be repeated, the analysis is not abstracted from uncertainty with respect to these variables.

*Market Structure and Efficiency.* In light of the conditions for an adequate theory laid down earlier, the test for optimal industry performance cannot assume static conditions with respect to product, its costs, or its demand. We must be prepared to consider whether, with uncertainty present, the structure of the industry inhibits or favors both the best product and the best method of production possible under the existing general state of technical knowledge. Or, conversely, the possibility must be considered that the structure which has evolved reflects attempts to mitigate the impact of uncertainty of various possible origins.

This brings us to the issue between two schools. On the one hand there is the more orthodox view that fewness of sellers and product differentiation lead to output at less than the optimum rate and deter progressiveness. The opposing view, most usually associated with Schumpeter and J. M. Clark, sees in this insulation the necessary conditions for the assumption of risks and uncertainties associated not only with innovation in product and process but also with other uncertainties related to investment in the most efficient equipment.

It is not possible to resolve this basic issue on the basis of empirical findings. Objective appraisal is inhibited by the difficulties of delineating the various types of forces bearing on resource use in particular industries. My own view—and it is only a judgment—is that there is a significant degree of truth in the idea that product quality and the structure of costs will be socially more favorable in many industries if there is some insulation from overt price competition. But I do not think that this degree of insulation requires the current size distribution of sellers in some industries.

*Determinants of the Character of Competition.* Beyond questions of the technology and costs are those of factors usually considered to determine the slope of the individual firm's revenue curve. Here the character of interfirm rivalry is explored as it is affected both by basic conditions of product demand and feasible technology (to which all the firms in the group are subject) and by the discretionary actions of members of the industry.

1. *Market Characteristics of the Product.* The forms and effectiveness of competition are affected to an important degree by the market characteristics of the product. The categories developed in marketing literature are particularly helpful, for they reflect not only the buying motives and skill of final purchasers but also the role of the intermediate distributive trades with respect to various goods. These cate-

gories are: (*a*) "Specialty goods," which are those characterized by the fact that the buyer may first have to be convinced of the merits of the good before he can be induced to purchase it and by the fact that, once convinced, the buyer will go to considerable difficulty to obtain the product of a particular producer. Excellent examples of specialty goods are the newer, "big-ticket" electrical appliances. (*b*) "Shopping goods," which are those bought after comparison of the quality of the products and prices of various suppliers. Excellent examples are piece goods, furniture, and fresh produce. (*c*) "Convenience goods," which are those purchased frequently and are often ordered by description or specification. Examples include both specialty items, such as toothpaste or prepared cereals, and standard items, such as sugar.

The relative roles of the manufacturer and of the distributive trades vary widely among these categories of commodities partly because of corresponding variations in the competence of consumers as buyers. The manufacturer can with varying degrees of success build and hold final buyer preferences for specialty goods, but he is also dependent on the performance of his dealers. Retailers of the specialty subclass of convenience goods tend to be reduced to the role of order-takers because consumers are not good judges of quality of these goods. On the other hand, the distributive trade tends to be in the saddle in the cases of shopping goods and standardized convenience goods.

There is a strong tendency for the market characteristics of goods to change over time in such a way as to undermine any differentiation that yields abnormal profits. This means that specialty goods tend to become shopping goods or standardized convenience goods as they become part of the consumption pattern of most families and as the quality of the goods becomes satisfactory and quite uniform among suppliers. Likewise, convenience goods of the specialty subtype tend to become fairly standardized as far as buyers are concerned. Few products are so stable in their physical attributes and in their use that they escape this process entirely.

This evolution reflects to some degree growing buyer erudition but even that—and certainly the development of the satisfactory quality of the product itself—is a part of interfirm rivalry. In consumer goods the large retail organizations have had a major role in this dynamic and quite continuous process.

Where this evolutionary process is not important, the stable market characteristics of the product, plus the degree of variability in what buyers want and the organization of the distributive trade, go far to determine the degree and character of the market segmentation which prevails. Segmentation does not get far for sugar; it is more important for canned goods; and it is a fundamental aspect of markets for the

big-ticket products which combine specialty and shopping characteristics.

2. *Influence of Methods of Production and Structure of Costs.* Here only certain aspects of the conditions of production and cost will be stressed, because the others are obvious. First, there is the question of the extent to which the method of production is a given for the firm and the extent to which it may be altered upon the firm's initiative. One method may be more capitalistic than another and the related risks may be higher. Then, for the individual firm, the proportion of the total processing, or of that plus raw material production and product distribution done by it, affects its cost structure. But there frequently are a number of feasible methods of vertical organization. Companies may engage in all or several vertical steps or they may merely assemble or blend parts or materials prepared by others with consequent effects on their capital requirements and on the relation of their fixed and variable costs.

3. *Is Market Structure Determinate?* While the significance of autonomous determinants of the conditions of competition becomes more evident as one learns more about particular markets, their role must not be overstressed. The size distribution and other structural attributes reflect the firm's past decisions. These may reflect mistakes, conscious moves or conditions long since gone, or conscious moves to control competition. Consequently, firms may be larger or more varied in their activities than the conditions of cost, of demand, and of uncertainty would require. Weighing the effect of such "artificial" structural elements is difficult.

My view is that the structure and operation of markets have a strong tendency to reflect the market characteristics of the product, the feasible conditions of its production, and the organization of adjacent industries. Such factors influence even those industries that are made highly concentrated by design and dominate other industries still more completely. But in no event must these conditions be viewed as fully determinate of either market structure or operations. Rather these forces define a zone within which management makes choices but of a sort which do not in most cases tie the hands of existing or potential rivals.

*Conditions and Effectiveness of Entry.* Four somewhat overlapping aspects of the entry problem should be underscored.

1. Entry by established firms because of either profit opportunities in a field unrelated to the firm's initial activity or in an adjacent field or level is a widespread and a powerful competitive force. Movements into an adjacent industry may be either horizontal or vertical. Of these the vertical is the more promising, both because of the awareness of entry possibilities which a vertically adjacent firm is likely to have and be-

cause such firms often possess the characteristic essential for successful entry.

2. Entry may be facilitated by the fact that most product lines and their associated markets are segmentized. Entry into some segments often is easy because they approach the purely competitive in character. Once such entry occurs, movement of that firm toward the segments where entry by a new firm would be very difficult may be, but not necessarily is, fairly easy. If it is, what might be an unscalable cliff if a new firm were to attempt to enter the difficult segment directly, will prove to be a set of stairs.

3. Entry may be by the route of producing a substitute product or using better raw materials or manufacturing processes. Developments in chemistry, particularly, often can be used by the would-be entrants—frequently well-established firms—to enter with a product or process which can be substituted for those already in use.

4. The effects of entry can be obtained at times by the assumption of a function usually carried out by firms engaged in another vertical step without actually owning the operation in that step. The most important case of this sort is the taking over by a distributive organization of the responsibility for distribution, including the branding, of a commodity which meets the buyers' specifications.

Such potential sources and forms of entry have been widely employed in recent years, which leads to the question as to whether the economic effects of entry stem from the fear of entry or from the force of actual entry. The former has been stressed in the literature and has been supported by some empirical evidence. In order for fear of entry to govern prices or to expedite process or product improvement, however, two conditions would have to exist. Potential entrants would have to be aware of the abnormal profits existing or of those obtainable by developing a substitute product or channel of sale. Second, there would have to be quasi-agreement among established sellers, not merely as to the proper level of price, but also to refrain from themselves making such moves as introducing substitute products or channels of sale which would have the same effect as entry.

Three observations, no one of which can be adequately documented, can be made relevant to whether management's fear of entry or the actual occurrence of entry is the more important. For products which have the prospect of a long life, firms often hold prices at a level that will provide good but not high profits because of confidence of better long-run results. This policy reflects in part a desire to discourage entry, but not usually, I believe, in the sense of a specific appraisal having been made of entry prospects at different levels of price for the given product. Instead, a general policy as to margin over factory cost or esti-

mated total cost, which may reflect experience as to margins which discourage entry, is applied to a wide category of goods. Second, specific potential entrants—usually companies or industries to which part of the product line is sold—may be "bought off," perhaps even by prices below total cost. Third, and most generally, it seems to me that entry actually occurs and forces down the price, or at least reduces sharply the share of the market that can be held by older firms without reducing price. The latter is important for consumer goods, for often entry is by a substitute product or by the creation of separate market segment for a lower priced but physically similar product.

If there are vertically-adjacent businesses which would be able, in terms of size, organization, and financial resources, to enter an industry and do not (or are not bought off by preferential pricing), this is prima facie evidence that this industry is performing competitively. According to this test, meat packing would be judged to be competitive, but the test would not prove building materials manufacture to be so, because there is a lack of potential, vertically-placed entrants into that business.

What may be more feared than entry is the prospect that abnormal profits will lead firms already in the industry to expand shares by devices which fall short of overt price cuts and which are difficult to restrain or counter or, indeed, whose effectiveness is difficult to appraise *ex ante* but which nevertheless do force down realizations relative to cost. This is but part of the competitive conduct to which we now turn.

*Product Quality and Cost-price Effects of Non-price Competition.* Maneuvers other than overt price change for an unchanged product have a major role in determining the economic attributes of equilibria in industrial markets. Let us assume a tacit (or even overt) agreement on a level of price which yields abnormal profits. Such an agreement does not of itself foreclose but rather encourages other moves such as product and process change, sales effort, and the development of new sales channels.

The list does not end there. In consumer goods industries, entry by some of the collaborators into lower priced segments of the market tends to pull down prices there, and, as a result, the agreed-on prices in the more defensible and higher priced segments become untenable. In other cases—particularly those of producers of standardized materials—integration into a fabrication or distribution stage facilitates not merely competition in the quality of the product and attendant services but also the making of price concessions. Just how rapidly and to what extent such forces work and how much they reduce realizations for the product line will vary widely.

Tacit or even formal agreement about these methods of competition is improbable for the following reasons:

1. In the use of these other variables, the output of various firms per unit of input does not necessarily tend toward uniformity. There is a substantial chance that with a given expenditure one firm may do much better with particular techniques of distribution and selling or be more successful in product research than will rivals. This contrasts with our usual assumption of a strong tendency toward equal output per unit of input.

2. An important contribution to a firm's market position may result from being first or more active in nonprice competition, but rarely is that gain derived from being first in price competition.

3. Alternatives to price competition involve maneuvers from which retreat is easy when desirable or from which a tangential move is feasible. Neither is true of a price cut.

To the extent that these forms of competition are effective, noncompetitive levels of prices and profits are subject to erosion. Much work has to be done before we know how rapidly this erosion occurs and how well it stacks up against potential alternatives.

It must be evident, also, that the extent to which beneficial economic results stem from these forms of competition depends in large part on the degree to which a dynamic view of such markets is appropriate. If technology is an independent variable which would be fully utilized if far more overt price competition were engaged in, then the results of nonprice competition are not good. If, however, the degree of optimal use of technology is itself a reflection of the industry structure and the choice made of competitive methods, much good can be seen. Clearly, one's conclusions as to the validity of the Schumpeterian framework would vary among industries and, for a given industry, among stages in its development.

There is also the second part of the Schumpeterian argument—which was postponed earlier—namely, the eroding of the insulated positions of established firms resulting both from the entry of large firms and from the nonprice competition provided by them. No comprehensive empirical study of this proposition has been made. My own opinion is that the erosion tendency is strong in a large portion of industrial situations, that in some ways it is costly to the economy, but that these costs must be balanced against the feasibility of alternative routes to progress in an industrial society.

*Summary.* The theoretical framework just sketched is really a generalized form of the long-standing analysis of the reaction of firms to profit opportunities. Ordinarily, the emphasis has been on the case of the firm that has lower costs for a given product than its rivals and which, if rewards appear good compared to risks, would expand output.

Here, however, the way in which even such a factor as entry can

work must be adapted to the characteristics of industrial markets. Thus variables held constant in a simple cost-price-output model must be introduced and their significance explored not merely by assuming them to be equivalent to a price change. When that is done, one finds that these variables have, potentially, a major effect on economic results and operate in spite of, and tend to undermine, a level of price for an unchanged product whenever that price fails to reflect an optimal combination of product quality, process and cost, and output rate.

For a given product line, it is helpful to visualize a composite demand situation in which each item in the line has a demand curve of different elasticity. In addition, each item entails somewhat different direct costs of production and quite different general overhead costs. Different firms may be selling different items but usually each firm sells more than one. An optimum use of resources, in the sense of obtaining the full economies of scale and the full use of capacity, is quite possible in such a case, even though the revenue curves in some segments are far from perfectly elastic. The reasons are, for static analysis, that the revenue curves in some segments are perfectly elastic and this tends to eliminate unused capacity. For dynamic analysis, the major point is that in an industry so structured, uncertainty may be sufficiently minimized that the optimum scale of plant will be actually established.

Once one goes further and observes historical or dynamic processes, he will see that the relationships among segments need not be stationary. Revenue curves may, in fact ordinarily do, flatten out in the higher priced segments, and changes in the product, in the process of its manufacture, or in the channels of its sale, work to upset those price relationships among segments of the industry which do not reflect cost differences.

When viewed this way the economic attributes of a balance cannot be appraised solely or even primarily by examining the cost-price-output relations for an unchanging, narrowly defined product. One must consider in addition the unmeasurable changes in product quality and the measurable effects of technological advance on the level of costs. A qualitative judgment must then be made as to whether the maximum economies of scale are obtained. Finally, the efficiency with which committed resources are used and the division of the benefits thereof, that is, the price-cost-output relations which exist, must be judged for the entire family of items which go to make up the product line. Even then a single demonstration of cost-price-output relations cannot be made. A number of varied combinations and magnitudes of the variables stressed here are possible. Nevertheless, the general tenor of the argument, both as to the variables stressed and much of the empirical evidence referred to incidentally, is to suggest a strong tendency for

economic results of industrial markets to be closer to the optimum than one would conclude from much of the literature about this sector of the economy.

### *Reaction to Factor Price and Demand Movements*

The general argument to be presented here is that factor price movements tend to be reflected in corresponding price changes but that demand changes do not. Obviously the degree of concommittance of movement of these two forces will modify the general statement just made. Both these modifications, if pursued, and the general statement just made find their explanation in the fact that firms' reactions to cost and price and demand developments reflect the structural position in which they find themselves and their relative market positions.

*Reaction to a Factor Price Change.* Factor price movements do not directly affect market positions of particular firms, and consequently selling price responses are not apt to be disruptive. In part this is because firms recognize the tendency toward uniformity in impact of these cost changes, although there may be some difference in timing of this impact due to variations in firms' degrees of vertical integration or in their inventory positions. More basically, this reaction is because market position has to do primarily with selling. Only indirectly, as some firms react to the factor price movements, are the conditions of selling market rivalry altered by a factor price movement. But when factor prices fall, the initiator of a selling price reduction is not suspected of trying to enlarge his share. Or, in reverse, the boldness of the firm which moves to reflect higher factor prices in his selling prices is appreciated, particularly when margins have been squeezed sharply.

Yet the differential immediate impact of factor price movements on firms and on market segments has much to do with the selling price response. Firms which are not integrated vertically or which are in a short inventory position feel the factor price movement more promptly than do rivals with the opposite attributes. In most product markets there are some segments—it happens that these also are the more nearly open market segments—in which margins between direct costs and selling price are much narrower than in other segments. Factor price movements impinge more heavily on such narrow-margin sellers and they are anxious to change their prices as soon as possible.

When factor prices fall, the selling prices in the lower margin segments are apt to drop away from the quoted prices of the major-segment sellers and customers will be pulled away from the latter. This is the reason that major sellers are usually price followers on the downside.

On the other hand, when factor prices rise these low-margin sellers feel the margin squeeze heavily. They edge up their prices as much as

they can relative to those in the higher priced segment. This reduces the substitution between the goods of the sellers in that segment and of those in the low-margin segment, a development which paves the way for the former to raise their prices overtly. When they do so they are, in a sense, again price followers rather than leaders.

Another important influence of a factor price change is on the expectations of intermediate buyers. When factor prices rise, a firm's customers need not fear a selling price decline. Hence, they are in a position to make an almost riskless speculation in inventories by stepping up their orders in anticipation of a price movement. If factor prices fall, business customers can hold off orders, a development which often tips the balance toward a selling price change. In that event, the problem associated with the kinked demand curve tends not to be present. Indeed, a factor price change usually does not disturb the internal balance within the group but merely affects the level of costs and prices about which day-to-day rivalry brings small but not disruptive changes in realizations, volume, and market shares of rival firms.

All such conclusions must be tempered, however, according to the degree and frequency of factor price movements and the concurrent state of demand. The thesis just outlined obviously fits most closely the thin-margin industries whose buying prices vary frequently, such as those which process crude farm products. Their selling price changes are frequent and business customers have an almost perfect basis for speculative action.

Where such experiences are infrequent or where the cost change is small relative to the feasible unit of price change, there is more hesitancy and even some tendency to use the indirect means of adaptation to be sketched later in connection with reaction to demand changes. Price increases are more difficult to bring about, and noncollusive price leadership or other means of implementing a meeting of minds are apt to arise. The same may hold where there has been an accumulation of cost changes for relatively unimportant items which add up to an important reduction of profits. Of course, such small cost changes are often lost in a welter of product, channel of sale, and realization changes.

*Reaction to Demand Change.* Here attention focuses on a change of demand which, if followed by a roughly corresponding price change, would squeeze or enlarge the margin between direct costs and selling price. The marginal cost curve is assumed to be horizontal over a fairly wide range of volume rates. Demand changes usually affect the relative market positions of firms because the selling markets of firms are usually more varied in geographical coverage and in customers classes than are the earlier-stage markets for materials used in manufacturing. Some areas or some classes of customers will have experienced more or less variation in income or whatever is the cause of the change of

demand. Consequently, the impact on sellers of the demand change tends not to be uniform and overt price changes would augment the effect.

Both because a decline of demand creates excess capacity and hence each firm is unusually sensitive to loss of volume and because a price cut would then be viewed as a threat to market position, firms hesitate to initiate such a decline and react strongly to a price cut by a rival. In the first instance, firms tend to accept such volume and profits as the reduced industry demand will yield for the products, sales programs, and the price structure which were already in effect. Added intensity in carrying out the existing sales program may be tried. If the low demand is prolonged, selective price concessions may be made. Some firms may enter low-priced segments which they had avoided earlier. The degree to which such steps are taken is affected by the feasibility of these devices and by the proportion of costs which are fixed. Typically, overt price cuts which would squeeze the margin over direct costs will be made by the firms only when they become financially embarrassed or when the growth of price concessions and shift of volume to low-price segments makes the old level of prices in their major segments untenable. Whether or not such price changes are made, the level of realization for the product line as a whole will fall relative to direct costs.

Indeed, when demand falls, choices made by buyers among the items in a product line often reduce the level of realization without a change having occurred in the price for any one item. Particularly where consumer incomes have declined there is ample evidence that the proportion of long-margin items relative to short-margin ones falls. Consequently, the margin over direct costs for the product line as a whole will be reduced, and unless overhead outlays can be cut, profits will drop sharply.

Except where the margin between direct cost and price has been squeezed by earlier developments, an increase in demand is followed by a process reverse to that just described. Here the idea of the kink in demand is particularly relevant. Short of sharp pressure from rising marginal costs (not higher factor prices), which may not occur until output exceeds that for which existing facilities were designed, no one seller would have reason to expect to be followed in a price increase. Aggregate profits of the firms are rising. Firms are inclined to use such an occasion to cement relations with customers, and failing to advance prices is a good method. Those whose market shares (and possibly market positions also) might appear to mark them as most likely to advance prices are often gaining by a shift within their line to the long-margin items and channels of sale. The firms who are lagging in these regards are least likely to follow a price increase.

On what happens when sharply rising marginal costs are faced, our

evidence is less conclusive. In more normal times than those of recent years—if there be such—demand increases are less sharp. On such occasions firms are apt to undertake a capacity expansion and to ration customers rather than to increase selling prices in the meantime. All such conduct is motivated by the desire to preserve and, if possible, to increase the strength of the firm's market position.

*Summary*. In spite of modifications necessary for particular situations, most of which have not been spelled out here, the contrast between reaction to a change in demand and to a change in factor prices is valid and important. In direct proportion to the cost impact (and frequency) of change of factor prices, an approximately corresponding and overt change in selling price can be expected. On the other hand, an overt change in price which would squeeze or expand the gross margin over direct costs for identical products does not ordinarily occur in response to modest and short-term movements of demand. Instead, other adaptations initiated by either sellers or buyers reduce or expand the general level of realization relative to cost for the varied items and channels of sale which make up the market for a product line.

Indeed, a general rule, to which I think exceptions are few, is that the realization for the product line will always move in the direction of a change of demand whether or not associated with a movement of direct costs. The extent to which overt price moves, price concessions, changes in product and channel of sale, or variations in the proportion of volume made up long- and short-margin items, respectively, will be the source of this up or down movement of the level of realization for the product line relative to cost, will vary widely. Any analysis which omits changes in this realization for reasons other than those quoted or even transaction price changes for narrowly defined products will lead to inaccurate conclusions.[5]

### *Concluding Observations*

Definite and quantifiable conclusions cannot be laid out with respect to resource use in and welfare results of most industrial markets. Obviously these markets do not work like those whose structure approximates that of the pure competition model. That is irrelevant, for the final interest is in results. It seems to me both evident and understandable, once one is versed in the whole of the structure and operations of modern industrial markets, that their operating results approach more closely the ideal than one would surmise to be true from textbook models of oligopoly and monopolistic competition or from the

[5] The economic significance of the adjustment of the level of realization for a group of related items and a proposed method for measuring such realization changes have been considered by the present writer in "An Economic Appraisal of Price Measures," *Journal of the American Statistical Association*, December, 1951, pp. 461-479.

literature on concentration. This is the net result, I think, of sellers' reaction to uncertainty, of intersegment or even intermarket movement of firms or redivision of function, and of the wide opportunity for firms to gain individually by competitive devices other than overt price change —devices which after some lag tend to wipe out abnormally high margins for the product line as a whole. This means that I attach high value to the dynamic view of most of these markets. The degree to which optimal aggregate results are obtained for these reasons (and also the effect of lesser uncertainty on the actual attainment of the economies of scale) must differ substantially among markets, and only the beginnings of the specification of the determinants of those degrees can now be made. Obviously, however, the market adjustments sketched here work differently, often indirectly and more slowly, than one would visualize for an open market where there would be many buyers and sellers.

Given that conclusion, one's appraisal of the performance of such markets depends in considerable degree on what he expects market processes to accomplish. If he thinks in terms of providing guides to individuals' acts, such as relative prices as a guide to choices by consumers, these markets fall far short of the ideal, as do markets which are imperfect for any reason. Furthermore, if one's system of economics requires that prices respond directly and promptly to movements of demand, industrial markets stack up badly, for their adjustments in such cases tend to take place indirectly and laggardly. A reminder should be made, however, that these processes of indirect adjustment may bring cost-level and product-quality changes more rapidly than they would otherwise occur. Wherever these alternatives are feasible, they tend to bring about—slowly, to be sure—changes in the level of realization compared to cost for the product line as a whole and, to that degree, effectuate the adaptation to changes of demand which is called for in economic theory.

On the other hand, if one is concerned about a longer view of the performance of markets or concludes that only a longer view is appropriate for industrial markets, then his judgment of the performance sketched here is more optimistic. This latter view is what I take to have been the essence of the "workable competition" idea. In that sense, both the properties of equilibria and the reaction to factor price and demand movements in those industrial markets where effective, longer run collusion does not exist, have a strong tendency toward a desirable use of resources and toward adaptability to major changes in conditions of cost and demand.

# THE VALUE OF VALUE THEORY

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An evaluation of any body of theory requires some sort of implicit or explicit definition of the objectives of that theory. If the objectives are conceived of at a very concrete and specific level, the evaluation will be simpler and less vague but will lack the broad perspective which might be gained if the immediate objectives are put into a more general framework. To provide such a general setting, this paper will first consider the role of value theory in the actual analysis of economic problems. Once this has been done, the examination of the more specific objectives of value theory will take on greater significance. With respect to these more specific objectives, a number of fairly common charges regarding the limitations of value theory will be discussed, and from these, as a third part of the paper, some possible suggestions for future work in this area will be developed.

## I. *The Place of Value Theory in Economic Analysis*

For the purpose of this evaluation, it is convenient to divide economic problems into three general areas. I realize at the outset that such a division is highly arbitrary and that many other kinds of division would be equally valid. Insofar as economics is coincident with its literature, however, it is useful to observe implicit divisions which occur in that literature. Economics, like other fields of knowledge, does not develop evenly; certain areas of research progress faster and farther than others, so that they acquire a separate identity of their own. The three general areas I have chosen to delineate are the determination of the level of economic activity; the evolution or growth of economic systems; and the evaluation of the efficiency of resource allocation.

*The Level of Economic Activity.* The analysis of the level of activity in an economy has developed in the last two decades largely along aggregative lines. Such aggregative economic constructs as gross national product, disposable income, consumer expenditures, and gross capital formation have been utilized both theoretically and empirically to build models of aggregative economic behavior. Although these models have in them assumptions about the behavior of producers and consumers, value theory is rarely used explicitly. In the theory of the consumption function, perhaps, there has been some attempt to lean on that part of value theory concerned with consumer behavior, but in

general these attempts have not made much explicit use of formal value theory tools, nor have they been notably successful in developing an aggregative theory of consumer behavior. Indeed, it would seem that casual empiricism rather than analytic value theory has been the basis of most modelmaking relating to the level of activity in an economic system.

*The Evolution of Economic Systems.* Analysis concerned with the evolution and growth of economic systems is in general less formally developed than analysis of the level of economic activity. Work in this area has gone along two principal lines. The first has been the development of simplified abstract growth models involving a relatively small number of variables such as capital stock and technological change. These models are usually closely related to those used in the analysis of the level of economic activity. It is even truer here, however, that the relationships employed are either assumed or else derived from conventional time series data; formal value theory contributes very little. The second approach in this area is more institutional and historical, analyzing the rise and fall of specific institutions: such things as the growth of unionism, the development of countervailing power, the effect of the system of taxation, and the impact of atomic power are examined in the context of the existing institutions and operation of the economy. There is no particular reason why this sort of analysis should not utilize the tools of value theory, yet because of the concern of these discussions with political and social institutions it rarely seems appropriate to bring in the abstract concepts that are involved in value theory. Here, again, casual empiricism is substituted for analytic tools.

*The Efficiency of Resource Allocation.* In the area of the efficiency of resource allocation, in contrast with the preceding areas, considerable use actually has been made of value theory, as a tool in analyzing the behavior of producers and consumers under given sets of circumstances and in evaluating and comparing the consequences of such behavior. Even the most elementary course in economics spends considerable time showing the determinants of price and output under different market conditions, in order to demonstrate the social efficiency or inefficiency of certain forms of industrial organization. The marginal conditions of production and exchange used by some welfare economists to develop a criterion for optimum output are derived directly from value theory concepts. The area of efficiency of resource allocation is, in fact, the area in which value theory has played its major role. I do not wish at this time to digress to give my own personal views regarding the proper nature of this area of research. The extent of the controversy in the welfare economics literature of the last two decades has amply indicated that there are wide differences of opinion about just what the nature of

this area ought to be. In its widest sense, of course, this area includes both of the fields discussed above: the full utilization of resources and economic growth. For the purpose of this paper, however, a precise definition of the field is not necessary. Nor is it necessary to take the further step of asking whether work in the area has in fact added to the general fund of useful knowledge. For the present stage of evaluation, it is only necessary to establish that value theory is actually utilized in this area.

## II. *The Usefulness of Value Theory as a Tool of Analysis*

With this consideration of the relevance of value theory to economic analysis, it is now appropriate to proceed to the second phase of the evaluation: the consideration of the efficiency of value theory as a tool of analysis. Without this second step, no final evaluation of the contribution of value theory is possible. Even though value theory may have an important function, if it fulfills this function very inadequately it cannot be considered to be making a significant contribution to economics.

The objective of value theory as a tool of analysis is the explanation of producer and consumer behavior at the level of the individual decision-making unit, as opposed to the aggregative behavior pattern for the economy as a whole which represents the combined results produced by the actions of a large number of different decision-making units. Since I cannot, within the short space of this paper, hope to cover both the producer and consumer aspects of value theory, I will restrict myself to an explicit consideration of the theory of the firm. Much of what is said will, of course, also be applicable to the theory of consumer behavior. Although there are marked differences between the theory of producer behavior and the theory of consumer behavior, there is also an underlying similarity. This arbitrary procedure of singling out the theory of the firm for consideration is especially appropriate since the topic of this session is industrial pricing. Specifically, this section of the paper will consider the adequacy of the theory of the firm in supplying a meaningful method of analyzing industrial pricing.

The charges commonly made against the theory of the firm bear a striking family resemblance. Most of them are variants on the theme that in some manner or other the theory is unrealistic or irrelevant. In the following section I will try to be somewhat more concrete about the charges, but I must confess that all of those I shall mention are basically the same kind of objection. The specific charges I shall cover are (1) that value theory is tautological; (2) that many of the concepts of value theory have no empirical counterparts; (3) that the necessity of using rigid *ceteris paribus* assumptions paralyzes the analysis so that it

can say little about any concrete situation; (4) that many important factors influencing economic behavior are omitted from the analysis; and finally (5) that value theory has been designed to consider only a single product plant producing a durable, storable good, so that the theory is incapable of dealing with the complex situations found in most industrial firms.

The validity of the first charge—that the theory of the firm is tautological—depends in large part on whether profit maximization is taken to be the basic motive of producers' behavior or whether profit maximization is viewed as only one of many possible courses of action. To the extent that the profit maximization principle is considered to be indeed the basic determinant of producers' behavior, the theory of the firm is truly a theory. But if it is maintained that profit maximization is only an assumption that may or may not be true, the theory of the firm does reduce to a set of definitional statements. The situation is not unlike that famous discussion of the quantity equation versus the quantity theory. As long as none of the variables in the equation is given behavior characteristics, the quantity equation remains purely definitional. But once it is held, for instance, that velocity tends to remain constant, the equation becomes a theory. The charge that value theory is tautological in this sense, of course, does not condemn the theory for analytical purposes. Definitional frameworks can be very useful, even aside from the value of any single specific theory which is developed to interrelate the variables defined. National income accounting, for example, sets up an empirical framework which is useful for many analytic purposes and in numerous theoretical contexts.

Another sort of meaning, however, can be attached to the charge of tautology. This interpretation involves the basic nature of the concepts used in the theory of the firm: specifically, the coverage of the concepts of marginal cost and marginal revenue. If marginal cost and marginal revenue are defined to take into account all factors, actual or implied, that the producer considers, including such things as expectations, risk-bearing, frictions, and psychological predilections toward large or small output, it will be true that by definition every producer, because he is doing what he wants to do, is in fact maximizing profits, and that any apparent evidence to the contrary is misleading because it does not take into account all of the implicit components of cost and revenue. Stated in this extreme manner, the profit maximization premise of value theory would by definition always obtain. But since the concepts used in the analysis would not be independent of the results they were attempting to explain, no new or useful information would be added by using such a framework to study the behavior of the firm. Although a theory of the firm expressed in such blatant terms would find few sup-

porters, I fear that there is in most of us a tendency to make theory more general by subsuming more and more of the variables we are trying to explain in the very concepts used to make the explanation. I think it is a legitimate charge that value theory too often, in the attempt to attain theoretical generality, loses its analytic significance.

The second charge—that the concepts used in value theory have no measurable empirical counterparts—requires some investigation of the nature of these concepts. If the value theory concepts were tautologically derived from the principle of profit maximization in the manner just described, these concepts would certainly be unmeasurable. But even where the concepts are conceptually independent of what they seek to explain, it does not always follow that they will be measurable. For example, consider the concepts of price and quantity. These concepts have meaning only when the product itself does not change. Where product characteristics have changed, resort must be had to some sort of index number solution, and this is usually not theoretically satisfactory. Similarly, the elasticity of demand is a useful concept for empirical analysis only if the demand curve does not shift in the period under consideration or if, despite shifts, elasticity remains fairly constant both over a range of output and over time. Empirical measurements of elasticity have to operate upon these assumptions; so that at best they can result only in an idea of magnitude rather than in exact measurement. Marginal cost does not fare much better. Statistical measurements of marginal cost have been singularly unsuccessful, for the most part attempting to measure the marginal by fitting a regression to adjusted total cost figures. The problem here, like the problem with the demand curve, is that shifts in costs and random factors introduce a wide variability into the observed total cost figures, so that it is not easy to trace the exact course of the cost function.

The theory of the firm is even less satisfactory when it comes to the concepts of factor payments. The factors of production are generally conceived of as either three or four in number: land, labor, and capital, with or without entrepreneurship or risk-taking as a fourth. These factors, the theory states, will be utilized in production in such a manner as to equate the price of each with its marginal revenue product. Unfortunately, however, in empirical terms there is no way to separate the payments for these factors from one another. Wages paid may or may not cover the total payment for labor. In a small owner-operated firm, for instance, it is entirely possible for the labor contributed by the owner and his family to far outweigh any purchased labor. Rent is even less meaningful in an empirical context. A business may control a great many factors which produce a rental income and yet receive no rental payment for them. Thus a farmer who owns his own land should theo-

retically be paying himself a rent for this land, and it might appear proper to impute such a payment even though none is made. To do so empirically, however, is usually impossible, and the situation becomes correspondingly worse in more complex firms where there are no ready market prices for the factors owned. Profit is the most perplexing concept of all, because in any empirical measurement it must be a residual and probably contains some of each of the other factors as well as true profit. This is readily observable for farmers and small shopkeepers but is equally true for more complex firms.

Thus it must be admitted that the concepts used in the theory of the firm do not have any simple, convenient empirical counterparts. The consequences of this charge are quite serious when one considers the degree to which this impairs the usefulness of the theory of the firm for explaining actual industrial pricing. Unless the theoretical concepts correspond fairly closely to their empirical counterparts, no rigorous analytic explanation of what actually does take place in industrial pricing is possible. In fact, unless the concepts match, it is impossible even to express in theoretical terms what is happening in any given actual situation, much less explain it.

The third charge—that rigid *ceteris paribus* assumptions paralyze the theory of the firm so that little can be said about any concrete situation—is only partially justified. Quite often objections of this nature result from a misunderstanding of the function of *ceteris paribus* assumptions, with the consequent misconception that the theory of the firm should be able to explain a particular producer's behavior in a particular situation. The theory of the firm is concerned with the effect of certain specific variables upon the behavior of the firm. It does not deny that other factors may also affect the behavior of the firm. When other behavior-determining factors are present, the effect of the given variables may be obscured or distorted, thus producing an error term in the empirical analysis. Only by repeated trials can the theory be tested; if the error term then appears to be random, the theory may be considered satisfactory despite the fact that it does not provide a complete explanation of any one particular case.

Although the use of *ceteris paribus* assumptions is thus a necessary and useful part of the analytic method, it must be admitted that it can, in certain circumstances, limit the application of the theory to such a degree that no meaningful empirical analysis can be made. When the concepts of value theory are defined in such a manner that they are observable only in very special circumstances, the error term may be so large that empirical testing can only be inconclusive. It is probably true that the concepts of value theory which usually are used can be indicted on these grounds, but this is only a reiteration of the preceding

charge that value theory concepts have no convenient empirical counterparts rather than a legitimate attack on the use of *ceteris paribus* assumptions.

The fourth charge—that many important factors influencing economic behavior are omitted from the theory of the firm—is sometimes only a restatement of the objection to the *ceteris paribus* assumptions. Also, it is not always clear that those who make this objection realize that factors influencing economic behavior can implicitly be included in the analysis in terms of their effect on explicit factors. The theory of the firm is quite correct in omitting from explicit analysis many major factors which affect the behavior of the producer through their effect on cost or revenue. For example, the distance between a producer and his supplier may affect costs, but by using costs of materials delivered to the producer, this factor is implicitly covered. Such factors are not really excluded from consideration; they are part and parcel of the forces which determine the cost and revenue functions and are therefore implicitly included in them. A mere taxonomic listing of such determinants would do little to further an analytic approach to producer behavior.

On the other hand, it must also be admitted that there are factors which may have an important influence on producers' behavior that do not get included either implicitly or explicitly in the theory of the firm. Such things as the government's attitude toward industrial concentration or toward excessive profits for certain large firms may have an important bearing on the decisions of these firms. This is another way of saying that if the theory of the firm could be applied to empirical situations, the error terms which would result might be large and nonrandom. Unfortunately, since the theory of the firm cannot be tested empirically on any significant scale at this time, such charges can be neither substantiated nor denied.

Finally, the charge that value theory is designed to consider only a single product plant producing a durable, storable good and is incapable of dealing with the complex situations found in most industrial plants is again in part a reflection of the charge that the concepts used in the theory of the firm are applicable only to a small number of extremely simplified empirical situations. The full blame for the restricted application of the theory of the firm cannot be laid at the door of ill-constructed concepts, however, since academic economists seem to have bent over backwards in restricting their theoretical analyses to a manufacturing plant of a very simple variety and omitting from consideration producers operating in distributive trade, mining, services, etc. The concepts of the theory of the firm may be fairly useless for empirical applications, but they are by no means as inoperable theoretically

as they have been made to appear by traditional textbook presentations. Nevertheless, I must confess that the value theory concepts available would not be satisfactory for analyzing highly complex situations.

In summary, I believe it is fair to say that although value theory does have an important role in the analysis of resource allocation problems, there are very serious defects in the manner in which it fills this role. In all the charges against value theory, one major element stands out. The concepts of the theory of the firm are not set up to be operable in empirical terms, and this in turn prevents the theory of the firm from being tested empirically or from being used to analyze empirical situations.

Over and above this particular criticism of the inherent limitations of value theory for analyzing problems in the field of resource allocation, there still remains the criticism that was indicated in the first section of this paper; namely, that value theory is not used to any significant degree as a tool of analysis in the other areas of economics. Fundamentally, I feel that this failure also is directly traceable to the nature of the value theory concepts as traditionally defined. Because the micro concepts used in value theory are basically different from the macro concepts used in aggregative analysis, there is a wide gap between micro and macro theory. From a theoretical point of view, this gap is very unfortunate, because it means that value theory must remain a partial rather than a general equilibrium analysis and that aggregative theory, because of its different concepts, cannot use micro behavior theory to check the implicit propositions about producer and consumer behavior inherent in the aggregative behavior patterns which are posited or observed.

## III. *Suggestions for Future Work*

On the basis of this evaluation of the extent to which value theory is used in various areas of economics and the efficiency with which it fulfills these uses, I shall now bring up four related suggestions for the future development of work in this area. First, I believe that it should be explicitly recognized that the concepts of value theory as traditionally stated are not empirically operable, and in consequence that a separate conceptual framework must be erected for classifying empirical information about the individual firm. Second, I would hope that such a conceptual framework would be of a very general nature and would take into account the requirements of macro theory as well as those of micro theory. Third, I feel that the classification scheme adopted in this framework should have as its basic criterion empirical operability, but within this criterion both functional and institutional characteristics should be observed as much as possible. Finally, I would

suggest that such a framework should be used in conjunction with orthodox value theory rather than substituted for it.

Recognition that the conceptual framework of value theory as traditionally stated is not by itself sufficient for analyzing the empirical behavior of producers has important implications. It does not mean that value theory should be completely rejected. Value theory is still useful as a part of the research process; understanding the basic formal relationships of the major determinants of behavior and building models to study such relationships are necessary steps in the research process, and the concepts that are best adapted to this use may well not be adapted to the study of empirical material. The recent methodological history of macroeconomics provides an excellent illustration of this point. The theory of income and employment contains many empirically inoperable concepts, such as for example liquidity preference, the marginal efficiency of capital, and the propensity to consume. Even the definitional framework of the theory of income and employment, the equation $Y = C + I$, as originally stated was not particularly meaningful in empirical terms. Nevertheless, the basic ideas contained in this equation were capable of being developed into the empirical framework of national income accounting. I am citing the example of macro theory not merely as an analogy but rather to demonstrate a principle of methodological design. If this principle were applied to value theory, certain concepts such as the elasticity of demand and marginal cost might not appear directly in the empirical framework, any more than the propensity to consume or the marginal efficiency of capital appears in national accounts. The less measurable aspects of value theory are useful for analytic purposes and should influence the classification scheme, but they should not be an explicit part of the empty boxes we wish to fill. In the past, overemphasis on theory has all too often resulted in the proliferation of unfillable empty boxes, thus creating an unbridgeable gap between theoretical and empirical analysis.

This first suggestion leaves open the question of the nature of the empirical framework which we seek to erect. In developing this framework, again taking heed of the experience with national income accounting, I would suggest the desirability of making it as all-embracing as possible. All producing and consuming units in the economy, for example, should be capable of being fitted into the analysis conveniently and be capable of being interrelated with each other in meaningful terms. The basic principle of national income accounting and money flows analysis, that is, the use of transactions and the concept of money flows, would, I believe, meet this objective. The behavior of the firm would thus be thought of in terms of the transactions in which it engages. Following the basic principle of national accounts and money

flows a little further, the micro framework would concern itself with the classification of all the receipts and outlays of producers and consumers. I do not mean by these suggestions that the classifications currently used in national income accounting or money flows analysis should be directly transferred as a framework for micro analysis; quite on the contrary, I feel that the erection of a framework for micro analysis might well lead to the changing of many of the classifications which are now used in national income accounting and money flows analysis. What I would like to suggest, however, is that some sort of common classificatory framework be set up for both micro and macro data so that analyses can be carried out at varying levels of aggregation and disaggregation.

As my third suggestion, I think that within the general framework of receipts and outlays, the basic criterion of classification should be that the transactions grouped together should in some sense be homogeneous and easily distinguishable as such. The wage bill paid by the firm, materials purchased by the firm, and receipts from sales of goods are all classifications of this type. Both functional and institutional characteristics will be very useful as a basis for classifying flows. Thus purchases of materials can be distinguished from purchases of labor and social security tax payments can be distinguished from corporate tax payments. Institutional classifications such as the separation of salary payments from wage payments may be useful for certain kinds of analyses. Despite the comprehensiveness of such a receipts and outlays framework, many of the variables which are extremely useful for analytic purposes would not enter directly into it. This has also been found true in the field of national income accounting. Here such things as price and output indexes and the distribution of manpower among industries are all treated separately from the formal system of accounts. I should imagine that in the micro framework, too, such things as prices, output, and man-hours, perhaps sometimes in index form, would be required in addition to the formal framework itself.

Once the framework and its auxiliary information have been set up, the question of precisely how this framework is to be utilized in analyzing the behavior of the firm arises. As indicated in the discussion of the first suggestion, it should be emphasized that such a framework is not a substitute for value theory but is to be used in conjunction with it. What it does make possible is the analysis of the behavior of the flows within the firm under varying conditions. It is the purpose of the empirical framework to set forth such behavior relationships and to indicate their variation over time and from group to group. It is the function of value theory to analyze the conditions under which such behavior would emerge. Until an empirical framework is set up to be

used in conjunction with value theory, the progress that will be possible both in empirical work and in value theory will be very limited.

In conclusion, I would like to take up a specific example of the type of empirical-theoretical analysis to which I have been referring. We all know that the *Census of Manufactures* contains a great deal of useful information, and I have always been somewhat perplexed as to why this wealth of information has not been utilized to a greater extent than it has. The *Census of Manufactures* gives certain data in classifications which correspond quite closely to some of the concepts I have been discussing for an empirical framework. For example, it gives for various industries value of product, cost of materials, and direct wages paid. These particular classifications do not by themselves yield a highly refined or complex conceptual framework, but if we look at the other side of the picture and ask what can be done empirically with such an array, a number of interesting possibilities present themselves.

In many industries, the value of products, the wage bill, and materials purchased relate generally to the same body of goods; namely, the output of the plant during the year. The valuation of inventories creates a real problem in some industries, but for other industries the problem is not too serious. It is interesting to study, industry by industry, the movement of the value of product, the wage bill, and materials purchased relative to each other, on the grounds that the relative movements among these would reflect the same relative movements among the realized price of the product, wage cost, and materials cost; thus giving a picture of the changes in price-cost structure that occur in different industries with changes in income and employment. It should be pointed out at this juncture that the realized price is not necessarily the same as the quoted price. Such things as discounts and rebates will affect the realized price. Also, in some industries, sales of goods as seconds in order to dump them will be reflected in realized price but not in conventional price indexes. Wage cost, similarly, is not the same thing as the wage rate. Wage cost would reflect changes in the productivity of the worker, due either to technological change or changes in the scale of output, as well as any change in the wage rate. Similarly, materials cost may rise or fall, not only because the prices of materials have risen or fallen, but also because more or less materials are utilized per unit of output.

The results one gets from studying the interrelations of these particular flows and what they indicate about prices, wage costs, and materials costs in various industry groups are rather interesting. As one would anticipate, in those industries which process agricultural materials such as food and textiles, the cost of materials fluctuates much more widely than does wage cost. In theoretical terms this is to be

expected, since output in the agricultural sector does not fluctuate widely with changes in the aggregate level of income, so that the effect of income changes is reflected almost entirely in changes in the price of agricultural output. Wage rates are traditionally stickier than agricultural prices, so that in these industries, in the absence of violent change in technology or in productivity, materials cost would rise faster in times of rising income and fall further in periods of falling income than wage cost. In many of the mineral processing industries, however, the prices of raw materials do not fluctuate as widely as those of the agricultural raw materials. The amplitude of the fluctuation of material cost is often approximately the same as that of the fluctuation in wage cost. There are exceptions to this rule, and they are generally located in those sectors of the economy where materials are derived from mineral industries in which the mineral deposits in themselves are quite valuable. Probably the most interesting point of this whole analysis is that realized prices in the vast majority of industries tend to fluctuate with almost exactly the same amplitude as the weighted average of wage cost and materials cost, irrespective of whether the industries process agricultural or mineral products. Wage cost and material cost together represent a kind of direct cost of production, and the difference between this direct cost and total receipts can be thought of as a gross margin over direct costs. This gross margin shows remarkable stability for different industries, even when there are large changes in income and employment in the economy such as occurred between 1929 and 1931.

I cannot in the confines of this paper go into the ramifications of this particular analysis, but I do wish to point out that it has wide implications for the study of such things as the behavior of income flows in the various sectors of the economy and the effect of industrial organization on pricing. With respect to this latter point, for example, the form of industrial organization appears to have no significant effect, as far as I have been able to ascertain, upon the behavior of these gross margins, and thus price-cost behavior, in the economy. The traditional case for price inflexibility in certain sectors because of the industrial organization of these sectors is, therefore, in fact quite unfounded.

I have not meant to present in this paper an embryonic theory of industrial pricing; this is the function of the other speaker on the program. I have introduced the above analysis merely to illustrate that empirical analysis could be developed in a transactions framework and to point out that without some sort of empirical framework our theory of industrial pricing may indeed be just more empty boxes which we never can fill.

## DISCUSSION

Jesse W. Markham: When considered together Professor Ruggles' and Professor Heflebower's papers comprise a thoughtful treatment of price and market theory that is likely to be cited frequently in the future literature on this topic. Ruggles has given a lucid appraisal of the limitations to orthodox value theory concepts for purposes of empirical analysis; Heflebower has pointed toward an inductive theory derived from observations on the "real" world. Each is an appropriate complement to the other.

Before embarking on an appraisal of either paper, however, a few gratuitous comments on the nature of theory may be useful. A valid theory is built upon unassailable logic, whereas an invalid theory contains logical impurities which, once discovered, must be eliminated or the theory is likely to be condemned to the trash heap of mistaken conjectures. But theory, qua theory, can be valid and at the same time its assumptions unrealistic. Thus the theory of perfect competition as an abstraction has universal validity, but for a society forever and irretrievably committed to a compulsory cartel system the assumptions are unrealistic. I take it that what most theorists mean when they say "the test of a good theory is that it yields good predictions" is that the internal logic of the theory is unassailable and that the theory's assumptions are realistic.

These also appear to be two of Professor Heflebower's criteria for a "good" theory of imperfectly competitive markets—the area with which his analysis is exclusively concerned. According to Heflebower the task of theorizing involves identification of the variables relevant to a given problem and demonstration of what would be the net results of the interaction of those variables when assigned alternative dimensions.

But Heflebower pleads for much more than this. Theory is not merely to provide us with an accurate prediction when given assumptions are reasonably well fulfilled. It is also to provide the empirical content for the variables in that it must explain market structures and changes in market structures, it must be multivariate, it must not be limited to the price-cost-output nexus, and it must not be abstracted from uncertainty.

The full import of these provisions for Heflebower's theory cannot be appreciated without going more into detail than space permits. However, a brief outline of the market structural features from which Heflebower's generalizations are to be adduced gives a tolerably good impression of the burden he places upon his theory. Structure is to encompass, in addition to the familiar phenomena of numbers and size distributions of sellers and buyers, characteristics of the end-market demand, organization and influence of intermediate handlers, the multiproduct (and multi-item within a product line) aspects of sellers, the industry's cost structure, vertical organization with and without vertical integration, and the diversities in the structural attributes of firms in a given industry.

In view of the latter structural consideration, it would appear that Hefle-

bower had forever denied himself the use of a "representative firm" approach to the theory of markets and prices. However, since much of his subsequent analysis rests upon the "place" each firm occupies in the industry, he is obliged to employ some vehicle of representativeness. Thus Heflebower retains the best of both the Marshallian and Triffin worlds; namely, the firm that can be treated as a unique entity, existing apart from the industry for some purposes and as a "typical" member of an industry for others. Or, as Heflebower puts it, "interfirm rivalry is . . . affected by external conditions to which all the firms in a group are subject and . . . by the discretionary actions of members of the industry."

This dichotomy of interdependent and discretionary decision-making, while both novel and useful, confronts Heflebower's theory with a dilemma that is never satisfactorily resolved. For example, in decisions such as selecting its method of production, the firm appears frequently to be viewed as virtually independent of its rivals; in others, especially decisions on adjusting price to factor price changes, all the firms in the industry are usually viewed as completely interdependent. But surely firms using different methods of production are affected by factor price changes differently.

Having outlined such a formidably complicated and ambitious task for his theory, Heflebower at an early stage in his theory's development forsakes deductive logic and adopts a combination of the hunch and the empirical approach. Those who hold that theory is by definition a product of deductive logic will of course part company with Heflebower here. Some, this discussant included, would prefer to hear him out, not because empirical observations alone yield good theory, but because they greatly increase our stock of knowledge. Viewed in this light the analysis Heflebower builds around his "condition of balance" (by which he means the efficiency of resource use and income effects) is singularly rewarding; it identifies a particular state of equilibrium not heretofore identified.

Unfortunately, however, throughout his analysis Heflebower mostly disregards the analytical tools of orthodox value theory and appears to rely heavily upon something bearing close resemblance to the principle of cost-plus pricing—a strange skeleton to find in Heflebower's closet considering the fact that he was assigned the task of burying this corpse at the Princeton meetings in June, 1952.[1]

In summary, Heflebower's analysis must be appraised against the objective it sought to attain and the principal conclusion to which it led. If its objective was a full-blown theory of oligopoly that would yield good predictions, it did not produce such a theory, but it clearly revealed the scope such a theory must take and it may have moved us toward one. The conclusion to which his analysis led was that oligopoly gives rise to a state of stable balance that is workably competitive. On this score I prefer to delay judgment of Heflebower's contribution until workable competition has been defined in reasonably precise terms—a prospect that looms brighter all the time.

On Professor Ruggles' paper I have less to say, principally because I

[1] Universities—National Bureau Committee for Economic Research Conference on Business Concentration and Price Policy, Princeton University, June 17–19, 1952.

agree essentially with most of what it says—and says so well. Few would take exception to his thesis that value theory should be more operable. However, I am persuaded that orthodox value theory concepts are more empirically operable than Professor Ruggles implies. True, as presently formulated they do not lend themselves readily to detailed empirical verification; but this may be attributed as much to the irrationality of orthodox accounting practices as to the inoperability of orthodox theory. However, even without highly satisfactory empirical data, value theory has been fruitfully employed in pursuit of analysis, as the spate of industry studies performed over the past two decades will attest.

Furthermore, I feel that Professor Ruggles needs to draw a clearer distinction than he does between the operability of value theory in the competitive and noncompetitive areas of the economy. Under near-pure competition the firm has no choice but to maximize short-run profits; it is the only course that offers the hope of survival. In this area, theory as presently formulated is highly applicable. On the other hand, under conditions of near-monopoly the entrepreneur has a wider range of choice, and the skills of other social scientists may be as necessary to predict all his decisions, if this is what we wish, as those of the economist. Hence, in the competitive area Professor Ruggles' suggested set of receipts and expenditures classifications may add much to the empirical operability of theory; presumably the same set of classes, each with roughly equivalent magnitudes, would be common to all firms. In the noncompetitive sector more than a classification scheme is obviously needed. But this distinction notwithstanding, if reorientation of theory toward such a classification would help bridge the gulf between micro and macro analysis, this alone would be a sufficient reason for doing so. However, the use to which Professor Boulding's reorientation of theory toward balance-sheet items has been put so far gives little cause for optimism along these lines.

Finally, a brief word should be said about the empty boxes to which Professor Ruggles refers. Surely it is the task of the theorist to theorize, and the essence of theorizing is abstraction and experimentation with explanatory hypotheses. This is not to say that theorists should be indifferent to practical application, but they should not be greatly restrained by it. In this respect the theoretical scientist is to be distinguished from the engineer: the former is concerned with formulating explanatory hypotheses, the latter with empirical adaptation. Accordingly, when Ruggles proposes the erection of a separate conceptual framework for classifying empirical information "to be used in conjunction with orthodox value theory rather than substituted for it," he unwittingly may be proposing the creation of a corps of economic engineers. Such a proposal has considerable merit.

This interpretation of his proposal at least helps clarify the problem of empty boxes. From one point of view, some of Mr. Clapham's famous empty boxes may only suggest that theoretical formulation has out-distanced the systematic adaptation of theory to empirical data. However, if the choice is sometimes reduced to empty boxes on the one hand or a shortage of abstract logic on the other, we should certainly much prefer the former.

VERNON A. MUND: Professor Ruggles' paper raises significant questions

about the very heart of economic theory; namely, value theory and its usefulness. Value theory, historically considered, has been concerned with the relative importance of goods and services. The basic question, for example, is why two bushels of oats exchange for one bushel of wheat. As is well known, two fundamental explanations have been developed. They are the labor theory of value as modified by Marshall's analysis of real costs and the imputation theory developed by Menger, Jevons, and J. B. Clark, with the subsequent addition of the opportunity-cost doctrine.

Professor Ruggles finds that value theory has been and is now little used in the actual analysis of economic problems. In studies on the level of economic activity, he states, "value theory is rarely used explicitly." I concur. Implicitly, however, I think that it is used. Keynes, it is said, taught Marshall's *Principles*, Book 5, Chapters 3, 4, and 5, for some twenty years. Indeed, Marshallian cost theory, I believe, underlies his general analysis, particularly his concept of the marginal efficiency of capital.

Professor Ruggles suggests that in the area of resource allocation greater use has been made of value theory. This, I take it, reflects a recognition of the imputation theory of value. Under a system of free enterprise, scarce resources tend to be allocated in accordance with the relative urgency of consumer wants.

Professor Ruggles believes that value theory has not been particularly useful for two main reasons: inherent limitations and the nature of the value theory concepts. My suggestion, however, is that this condition flows not from value theory, as such, but rather from the kind of value theory used and from the techniques employed in using it.

Broadly considered, I should like to suggest that the small use which has been made of value theory stems from the inadequacy of the value theory embraced by some economists. In the long run, certain economists hold, prices are determined by expenses of production, including a reasonable return on capital. Expenses of production, in turn, are explained by "real costs"; i. e., labor time or sacrifice and abstinence. Numerous qualifications are made, but the cost-of-production theory, I believe, has not been generally abandoned. Nor has the imputation-opportunity cost theory been generally accepted.

Adherence to the cost-of-production theory in any of its several forms, I believe, leads to the making of significant errors in actual economic studies. Many economists recognize this and accordingly are shy about using value theory. Upon the basis of the cost theory, for example, demands are made that prices—particularly those of farm products—should be fixed in accordance with costs. Tariffs, it is urged, should be used to equalize costs of production. Statutes should be enacted to prohibit sales below cost.

In economic analysis, too, the cost theory creates confusion, particularly with respect to the capital concept. Some economists relate the yields of a capital asset to its cost price. This procedure, however, overlooks the empirical fact of capitalization and the role of discount in the pricing of capital goods. Also, in business cycle theory, the older capital concept minimizes the conditions of speculation and overcapitalization of capital assets which develop in a business boom.

Professor Ruggles' suggestions for the making of future studies along em-

pirical-theoretical lines are significant and timely. His thoughts with reference to the *Census of Manufactures* are particularly promising. This type of work will be important for the development of new generalizations. It will also be useful in providing insights for testing basic value theory which, in my opinion, must largely be determined by deductive reasoning and logical analysis.

In developing a theory of industrial markets and prices, Professor Heflebower centers his attention on the relationships which are inherent in situations characterized by "fewness of participants" and by product differentiation and diversity. Industry groups which would appear to meet these tests, studies on concentration show, include hard-surface floor coverings, distilled liquors, plumbing equipment, rubber tires and tubes, office and store machines, and biscuits and crackers, to name only a few.

Professor Heflebower observes that in the markets so described "a state of balance is achieved . . . and this balance is not easily disturbed." This condition, he finds, arises from "the diversity among the firms" in a market grouping. In the past, oligopoly theory has emphasized the instability of prices and sales policies in the absence of collusion. Professor Heflebower notes, however, that as an actual fact "few such markets seem disorderly in the absence of evidence of collusion." In seeking an explanation, he finds that balance tends to be established through an evolutionary, historical, and sometimes consciously determined process in which the forces of diversity in products, qualities, services, business roles, and relative prices generate conditions of equilibria which he calls "zones of oscillation." With pure oligopoly, he states, these forces are not operative, and business firms seek stability either in collusion or in the diversity of vertical integration.

Differentiation and diversity in the products of a firm give rise to Professor Heflebower's concept of "market position." This concept, he states, "is at the heart of the problem of stability." The market position of a firm is a complex of attributes making for commercial strength. It varies in degree, and business rivalry to maintain or improve it generates many changes and adjustments in output, costs, product forms, and business organization. Rarely, however, do the changes express themselves in flexible price movements, as in open markets.

In essence, Professor Heflebower's thesis is that diversity and variety in market structure and product forms give rise to zones within which sellers "need not fear upsetting action by rivals." When sellers are few, variations in styles, services, qualities, patterns, financial resources, and related factors contribute to a stability in which collusion may have no part. This analysis, in my opinion, adds further to our knowledge of present-day industrial markets. It provides also an important addition to oligopoly theory.

Professor Heflebower states that in the markets under study, prices, as a rule, do not respond directly and promptly to changes in demand. Price adjustments are made indirectly and laggardly. We have had concrete evidence of this condition during the past several years with the general easing of demand. Prices in numerous industrial areas have been maintained or increased in the face of shrinking sales. When demand declines, does not price rigidity beget instability? Does not this rigidity aggravate excess capacity and unemployment? Do not the strong market positions of oligopoly create further im-

balance with the more competitive segments of the economy in which prices are more responsive to movements of demand?

My hope is that Professor Heflebower will carry further his work on industrial markets and consider whether the balance tendency operating within a market grouping contributes to balance or imbalance in the total economy, both in the short term and in the long term.

HENRY M. OLIVER, JR.: Upon reading Ruggles' and Heflebower's papers, I found much more with which to agree than to disagree. Of the various topics which they discussed I shall comment briefly on only two: the purposes of price theory and the effects of disagreement with respect to theory's purposes upon evaluations of different theories; the use of such concepts as maximization of long-run profits and adaptation to environment in the construction of hypotheses and the derivation of predictions.

The purposes of price theory are necessarily those of price theorists; hence there is room for disagreement. But the purposes do not seem to be sufficiently described by a reference to efficient allocation of resources. My own social and political views lead me to say that the proper purpose of economic theory is to aid decision-makers who are in some manner charged with the furtherance of the public good. In somewhat less general terms, the purpose of theory is to aid in predicting the significant results of changes which the decision-makers may be able to control and of uncontrolled changes which the decision-makers may be able to foresee.

What the decision-makers consider to be significant results will of course depend upon their interests; they will not be interested in all types of possible results. Price theory has been concerned with the various dimensions of price and with quantities and qualities of inputs and outputs. Thus the proper purpose of price theory is to aid in predictions concerning prices, inputs, and outputs whenever—and for whatever reason—a social decision-maker may be interested in these variables. An implicit premise here, of course, is that it is better for social decision-makers to be accurate prophets rather than inaccurate prophets.

This conclusion concerning the purposes of price theory may seem to be trite. I spell it out because differences in objectives and in political philosophies appear sometimes to be responsible for controversy concerning the merits of price theories. Thus an economist who envisages the state as limiting its activities to the enforcement of stable, general rules and to the provision of some traditional minimum of services may logically be contented with a price theory that says virtually nothing about the short period and comparatively little about the long run. On the other hand, an economist who believes that it is quite possible that the state will play a more ambitious role and who wishes state officials and voters to be well informed when they make their decisions, must logically make greater demands upon theory.

If we make only certain limited demands upon price theory, that is, if we inquire only concerning the direction of long-run adjustments to changes in factor price and concerning the long-run widths of profit margins remaining after adjustments in prices, products, capacities, and selling expenses, any of several competing theories will give us almost identical answers. Thus the

theory of pure competition, the theory of monopolistic competition, the theory of full-cost pricing, and the theory which Heflebower has expounded all say that in the long run commodity price will move with factor price and that profit margins will approximate the "normal." Controversy concerning the differential merits of these theories thus must logically arise from differences with respect to other long-run predictions and/or prognostications of short-run behavior.

One possible source of controversy is the question of the extent to which long-run adjustment takes the form of direct alteration of price or instead takes the form of alteration of product, productive capacity, or selling expenditure. Of the four theories mentioned in the preceding paragraph, Heflebower's occupies a position between the theory of pure competition and some expositions of the theory of monopolistic competition; the theory of full-cost pricing does not say what precise form adjustment will take.

These comments lead directly to a consideration of Heflebower's chief conclusion, that the "operating results" of actual industrial markets "approach more closely the ideal than one would surmise to be true from textbook models of oligopoly and monopolistic competition or from the literature on concentration." Let us, for the sake of argument, accept this conclusion and then ask what implications we can derive from it with respect to the formulation and exposition of theory. We cannot infer—and Heflebower of course does not say that we can infer—that we can satisfactorily return to some simple competitive theory approximating the theory of pure competition. Behavior predicted by simple competitive theory would differ from the behavior which we observe in most industrial markets in various respects which could be significant for policy.

A few such differences in prediction with respect to costs, prices, and wages come quickly to mind. The simple competitive model pictures the firm as quoting a price approximating marginal cost, as nearly always operating under conditions of rising marginal cost, and as operating beyond the point of least average cost about as frequently as short of that point. Moreover, the model also pictures the firm as paying little or no attention to long-run strategy. We must therefore deduce from the model that a rise in demand will nearly always bring about a rise in price, that a higher price is nearly always necessary to induce a rise in output, and that the governmental setting of a maximum price below the initially prevailing market level would nearly always lead to a reduction in output. We must also deduce, with respect to wage theory, that physical marginal product will nearly always fall when employment rises and that, if wage rates are pushed up for firms in one area but not for firms located in other areas competing in the same sales market, the resulting cost increases will nearly always cause those firms experiencing higher costs to cut production and employment.

Thus, even if we accept Heflebower's conclusion concerning the formal welfare merits of industrial behavior, we cannot argue from it that a simple competitive theory tells us nearly all that we need to know. The principal significance of his conclusion is to add to the burden of proof already shouldered by economists who employ familiar types of welfare reasoning in

attempts to justify various instances of governmental intervention.

Regardless of the price theory which an economist endorses as the best, he is likely to base many of his predictions on direct observations in no way derived from his formal theory. For instance, economists who use the familiar marginalist reasoning and who also picture marginal revenue and marginal cost curves as both continuous and sloping know that many industrial prices are rather sticky; hence they do not draw the conclusion from their model that prices will fluctuate with every variation in demand. Instead they interpret the demand and marginal revenue curves in such a way as to make their model consistent with what they know to be the facts. Similarly, when Heflebower remarks that commodity prices will change more readily with alterations in factor price than with movements in demand, his confidence in this generalization is based primarily upon his observations rather than upon faith in the theory which he develops. The chain of reasoning in such cases is from observed response to hypothesis rather than from hypothesis to predicted response. Operational significance attaches here to what Ruggles terms "casual empiricism" instead of what he calls "analytic value theory."

There is no harm in this practice. On the contrary, it is highly desirable that economists alter their theories when they discover them to be inconsistent with observed behavior. But there is likely to be harm in pretense that formal theory is what yields the predictions in such cases. Such pretense tends to make the pretender and his students less aware of the inadequacies of the theory.

A theory widely expounded today is that firms seek to maximize long-run profits. But the concept of long-run maximization of pecuniary gains is vague when employed by analysts with limited knowledge of the circumstances and redundant when employed by analysts who translate the concept into observed behavior patterns. This conclusion also applies to the related concepts of maximization of "gain" (pecuniary and nonpecuniary) and adaptation to environment.

The reason for emphasis upon long-run, as distinct from short-run, maximization of profits is easy to understand. But unless we know quite a bit about the particular market situation which we are analyzing, we cannot say either what actions will maximize profits in the long run or what actions the relevant decision-makers believe will maximize profits in the long run. A sufficiently ingenious analyst unembarrassed by great knowledge of the facts of the case can show how widely different policies are each consistent with the hypothesized goal of maximum long-period gain. All that he needs to do is to alter his assumptions concerning his area of ignorance.

Of course, if we could apply super-Darwinian analysis to the theory of industrial markets and conclude that firms must behave in certain, definite, stated ways in order to survive, we could without qualms make use of the concept of long-run profit maximization (or maximization of "gain" or adaptation to environment). Except in certain extraordinary instances, a firm that does not survive does not maximize long-run pecuniary gains. But we cannot apply super-Darwinian analysis in this way. We usually cannot predict either what specific behavior will enable an individual firm to survive or what narrow

range of behavior will be significantly correlated with firms' survival. We can point to the specific modes of behavior characterizing successful and unsuccessful firms in the past, but we can also point out that successful modes themselves change from time to time, and we cannot at all be sure that untried modes would not also have been successful.

Along the same line, the fact that past behavior is not demonstrably inconsistent with the hypothesis of long-run profit maximization is not very significant for future predictions. Widely differing behavior also would not have been demonstrably inconsistent with the hypothesis. Moreover, past behavior is not demonstrably inconsistent with hypotheses not stressing profits to nearly so great a degree. Any attempt to support an economic theory by "predicting" responses that are already known is open to suspicion; and when the theory that is allegedly being checked is vague, such an attempt is doubly suspect.

This does not mean that the concept of long-run profit maximization is a useless one or that a theory which stresses it is utterly without merit. It is not completely vague; predictions based on the profit-maximization hypothesis must at least remain within broad limits. The concept also serves as a useful guide to thought or, in other words, as a clue in the search for stable behavior patterns. Moreover, if we discover an apparently stable behavior pattern, we may feel more confident of its stability if it seems to be consistent, or nearly consistent, with long-run profit maximization. If we possess very considerable knowledge of the circumstances, our profit criterion may enable us to predict what changes will bring about alteration in a previously stable pattern.

But we usually do not possess such knowledge; hence, insofar as predictions are concerned, once we have appealed to observed regularities of behavior, any further appeal to the criterion of maximum profits usually is at best redundant. If we let our thought be guided entirely by the search for regularities consistent with profit maximization, we are likely to miss an appreciable part of the truth. A desire for profits is not the only motive to which we can plausibly ascribe importance in industrial markets.

This conclusion necessitates another reference to Darwinian theory. If we could convincingly argue that some close approximation to long-run maximization of profits is usually necessary for survival, we could indeed neglect all other influences except those that work through their effects on profits. But this Darwinian argument is not convincing. Even an atomistically competitive firm often can survive without maximizing profits, as is evidenced by the examples of wheat and cotton farmers. The only valid general statement about profit maximization and survival is the following complicated one: If even when a firm maximizes profits only a very small part of its gross revenues consist of a net return to the resources owned by the firm, that firm must at least approximate profit maximization in order to survive. Notice that this logically necessary condition for the validity of the Darwinian argument is incapable of statistical test. Statistical data will not tell us that a firm is indeed maximizing its profits.

# TECHNOLOGICAL PROGRESS AND ECONOMIC INSTITUTIONS

## CONDITIONS OF AMERICAN TECHNOLOGICAL PROGRESS

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Estimates of the character and rate of future technological change enter explicitly or implicitly into virtually all longer term economic projections and they occupy an important place in all theories anticipating the eventual end of the capitalist world with either a bang or a whimper. Arrival at a "stationary state" after a brief interlude of industrialization was often taken for granted (or desired) by nineteenth-century intellectuals, even after Bagehot's title, *Physics and Politics* (1869), seemed to acknowledge that science was here to stay and to exert a continuing profound influence on human affairs.[1] More recently, Keynes's brief sketch of a "quasi-stationary community," which did not rule out changes in techniques and was hypothetical anyway, encouraged forecasts of stagnation for the mature economies of the real world.[2] Various thinkers have foreseen the resolution of the social "contradictions" of the modern scientific era in revolts of the masses, managers, or engineers. To Marx and Schumpeter, technological change was of the essence of capitalism, preparing it for an eventual collapse or "march" (or, if I may pun, a limp with Keynes) into socialism. Finally, the whole tradition of social engineering, from the French precursors of positivism to Lenin, Veblen and the "technocrats," has

[1] Economists nowadays invariably identify this stationary state with J. S. Mill and sometimes also with C. D. Wright or an obscure Commissioner of Patents who thought all the significant inventions had already been made. It is now difficult to appreciate the fact that, before Darwinism left its impress on social thinking, the industrial revolution was more likely to be accepted as a temporary phenomenon than as the beginning of a strange new period in human history. According to H. Adams, *Education of Henry Adams* (Modern Library Edition), pp. 493-494, even the scientists were not alert to the implications of mechanical energy before the discovery of radium.

[2] Keynes's quasi-stationary community, derived from implausible assumptions, nevertheless admitted "change and progress" resulting from "changes in technique, taste, population and institutions" (*The General Theory of Employment, Interest and Money* [Harcourt, Brace, 1936], pp. 220-221). Although Keynes presumably did not intend this brief sketch as a prognosis, it was so construed by unfriendly as well as sympathetic commentators. See, for example, H. G. Moulton, *Controlling Factors in Economic Development* (Brookings Institution, 1949), p. 132. Keynes never did elaborate his long-run views concerning the "socialization of investment" and the decline in the marginal efficiency of capital, but he did not necessarily anticipate stagnant conditions at an early date. See D. Dillard, *The Economics of John Maynard Keynes* (Prentice-Hall, 1948), pp. 156-159; and remarks in *Journal of Political Economy*, June, 1952, by G. Haberler, p. 240, and D. McC. Wright, p. 247.

asserted the central importance of achieving, maintaining, and extending the conditions of technological progress.

This paper is divided into four sections. The first deals with the meaning of the terms in the title, the second with the nature of the conditions of technological progress, the third with outstanding conditions of past American development, and the fourth with conditions shaping the American future. It would be foolhardly to suggest that these topics could be exhaustively treated in a paper of this length or without the benefit of a lifetime of reflection. A remark made by J. M. Clark at the end of a recent paper on conditions of economic growth and decline is also pertinent here: "There seems to be no danger that research will answer all the questions that confront us in connection with this subject."[3]

## I. *Meaning of "Technological Progress" and "Conditions"*

*Technological Progress and Related Concepts.* We may conveniently fix the meaning of technological progress by distinguishing it from two related concepts: economic growth and economic progress. Since the use of these terms is not yet standardized, many students will, of course, dissent from the version presented here.[4] At first, I shall ignore the structural aspects of these concepts, as though they could satisfactorily be treated as aggregates, and the problems of measurement, which actually are numerous and difficult.

Economic growth may be described roughly by an incremental or cumulative measure pertaining to a significant desideratum of a society. Appropriate indicators for a society like ours would include: national product, national income, material welfare, economic welfare, and reproducible tangible wealth (all money figures reduced to real or physical terms). Material welfare is a psychic or physical sum of goods and services made available for consumption or consumed.[5] Economic welfare equals material welfare plus leisure.[6]

Economic progress may be described by the ratio of a measure of

[3] J. M. Clark, "Common and Disparate Elements in National Growth and Decline," *Problems in the Study of Economic Growth* (National Bureau of Economic Research, 1949), p. 44.

[4] The difference between economics and technology has often been discussed. See, for example, L. Robbins, *An Essay on the Nature and Significance of Economic Science* (2nd ed.; London: Macmillan, 1935), pp. 32-38; F. Zweig, *Economics and Technology* (London: P. S. King, 1936), pp. 19-27; and T. Parsons, *The Social System* (Glencoe: Free Press, 1951), pp. 549-550.

[5] It may be required that this sum be reduced by net capital formation if the latter is negative.

[6] S. Kuznets has recently added estimates of the value of leisure into measures of real total and per capita flows of consumer goods and services. See his paper, "Long-Term Changes in the National Income of the United States of America Since 1870," in S. Kuznets, ed., *Income and Wealth in the United States: Trends and Structure*, Income and Wealth Series, II (Cambridge, England: Bowes and Bowes, 1952), pp. 63-69.

growth to the size of the population; e.g., by real national product per capita or, still better, by economic welfare per capita. It is a relationship between the fruit of productive activity and man as the end of production.

Technological progress may be described by the ratio of a comprehensive measure of incremental growth, like real national product, to the corresponding total resource input. Since capital input cannot be satisfactorily measured in real terms, it is customary to use labor alone in the denominator—labor force, employment, man-hours worked (or paid for). Although such labor productivity measures are generally regarded as mere proxies (and perhaps poor ones) of total productivity, they also are meaningful in their own right and without reference to any vulgar form of the labor theory of value.[7] They focus attention on the relationship between the fruit of productive activity and man as a means of production.

Broad measures of growth and progress conceal structural change—which is, however, a fundamental characteristic of both growth and progress. Alterations in the industry composition of our economic system and in the variety and quality of products and factor inputs are important facts to which it may be impossible to give valid quantitative expression. (An aggregative measure of economic progress, moreover, tells us nothing about changes in the degree of inequality of personal income, welfare, or wealth.) In any case, we often fail, for lack of data or boldness, to make more than partial adjustment for structural change.[8] If we could make such corrections, novelty in production—the introduction of a new product or an improvement in quality—would presumably be rated higher than a foregone older use of the same resources.

Technological change is a close algebraic kin of economic progress, according to the above definitions, and the conditions of one ought to be very similar to the conditions of the other. Finally, we may note that technological progress may still be made during a depression even while economic progress goes into reverse.

*Conditions*. The term "conditions" embraces practically everything other than the phenomenon under study—in this paper, practically everything other than technological progress itself. The term corresponds to what Keynes called "determinants"; it includes his given or relatively fixed factors and his more active independent variables. (*General Theory,* pages 245-247.) Given elements influence,

[7] *Ibid.*, pp. 74-76; and I. H. Siegel, *Concepts and Measurement of Production and Productivity* (U. S. Bureau of Labor Statistics, 1952), Chap. 2, especially pp. 22-23.

[8] Siegel, *op. cit.*, Chap. 2. Attention might also be called to the weak basis in economic theory (noted by Robbins, Pigou, and others) of output (and input) measurement over time.

but do not completely determine, the independent variables. In short-run problems, especially those dealing with one-time change, many more elements, of course, are regarded as given than in long-run problems. Furthermore, in problems of cumulative change—especially sequential change in a given desirable direction, which is regarded as "progress"—the events of one period take their place among the conditions influencing the events of the next period.

We must, then, in the study of long-term or sequential change recognize derived or emergent as well as original conditions. Original conditions which influence the initial state may or may not subsequently undergo alteration. Emergent conditions are generated by the process under study. Since they are difficult to forecast and may seem too conjectural to be given serious weight anyway, a preference for rigid models containing only a manageably small number of original conditions is understandable. But if such models lead to stationary states, to pessimistic appraisals of the future, their users ought not to be surprised, for vital contingent conditions have been omitted. Although any particular contingency (e.g., the development of a particular mode of transportation or communication) has a low probability, it is also true that some such improbable events are certain to occur—and their cumulative effects through interaction may be considerable.[9]

It should occasion no puzzlement or dismay that almost everything which coexists with the phenomenon under study may be regarded as a condition affecting it; that a concept or relation and its contrary may both be treated as complementary conditions; and that a condition said to have a stimulative (restraining) effect may often be shown also to have a restraining (stimulative) one. A total situation is a system in some kind of uneasy equilibrium, and any element making for change, including one which is antagonistic to the phenomenon of interest, contributes to the occurrence of exactly what happens. Thus ignorance as well as knowledge is vital to technological change and irrational behavior as well as rational calculation;[10] and a desire for change cannot

[9] The historian A. Nevins recently cited a remark by Guedalla which is pertinent here: One curious thing about history is that it really happened. For more discussion of some points raised above, see I. H. Siegel, "Technological Change and Long-Run Forecasting," *Journal of Business of the University of Chicago*, July, 1953, pp. 141-156. In his *Principles* (8th ed.; pp. 843-844), Marshall noted the importance of "the accumulated effects of forces which, though weak at first, get greater strength from the growth of their own effects."

[10] Indeed, inventors like Henry Ford and Thomas Edison insisted on "the value of ignorance"—the importance of approaching a problem without theoretical preconceptions. See G. Garrett, *The Wild Wheel* (New York: Pantheon, 1952), pp. 128 ff.

By irrational behavior, I mean action without reference to clear economic objectives, without any close calculation of expected gains, or without awareness of true costs. Irrational behavior is sometimes rationalizable; i.e., justifiable in retrospect on the basis of success. Much behavior which seems rational is better regarded as rationalizable. Thus, failure to take advantage of an opportunity for higher profit through a new combination of resources can be justified in retrospect in terms of a very high "cost of change," or the "marginal utility of not bothering about marginal utility" (Robbins).

be felt and carried out without an appreciation of tradition. But some conditions are major or decisive with respect to the occurrence, nonoccurrence, or magnitude of the phenomenon of interest, while others are minor in that they may assume a wide range of values without significant variation in effect.

As for ambiguity, a condition may have one meaning in the short run, in a problem of one-time change, and another in the long run, in a problem of sequential change. It may be differently interpreted by decision-makers of different temperament or in dissimilar circumstances. Thus, an excess profits tax may either discourage enterprise, through its effect on the net value of current income, or it may encourage research with cheap dollars to raise the future income potential. Similarly, a wage increase may either raise unit costs or eventually reduce them through stimulating technological change. Again, income inequality may be seen as either good or bad for economic growth. Finally, it is often asserted that war inhibits technological and economic progress, though one may suspect that the opposite is even more true.[11]

In the consideration of cumulative change and progress, the distinction between cause and effect, between condition and consequence, is not clear cut. The reason is that an event of one period, as has already been noted, itself affects the likelihood of future events. Furthermore, over a sufficiently long time, even the environmental factors of short-run problems become plastic—influenced by events of the kind to which they at first contribute as well as by others. The failure to recognize that a cumulative process is autocatalytic and regenerative, fueled by its own products, may lead to futile discussions of primacy reminiscent of the conundrum about the chicken and the egg. This sort of failure, together with the careless assumption that we may talk about economic events as though they occur in aggregates, gives an air of artificiality to some of the familiar questions of economic history: whether agricultural productivity increase is the cause or consequence of the release of rural labor to urban industry; whether high investment is a cause or consequence of high-level employment; whether population rise is a cause or consequence of economic growth; whether the values and traits of a population influence technological change or vice versa; whether high wages are a cause or consequence of a high level of net capital formation. Actually, both alternatives are more or less correct in a changing economy considered over time.

Lists of conditions which have been offered from time to time by

[11] Kuznets' view that "the technical accomplishments of a military production effort have dubious transference value to peacetime" (*loc. cit.*, p. 217) seems untenable in the light of all American experience. Zweig's view, *op. cit.*, pp. 176-178, seems more realistic.

students of growth and progress agree and differ in ways which might be expected in the light of the above remarks.[12] Some lists are short, others long. The recognized conditions may overlap, and they seldom belong to a unique classification scheme. The favorable aspects of contrary entities or relations (like ignorance or irrationality) are typically not mentioned. Distinctions between short-run and long-run change and between one-time change and cumulative change are generally not made. Minor conditions—those which are not especially active or interesting—are simply ignored, implicitly assumed to take on compatible values.

In making their lists of conditions, different students prefer different terminologies and classification schemes and they operate on different levels of aggregation and abstraction. The results are mixtures of broad and narrow entities of varying degrees of significance and of varying degrees of abstraction; relations between such entities; attributes of man and man-made institutions; and "atmospheres" generated by institutions.

Mathematical formulations are much neater than lists of conditions and may give the appearance of exhaustiveness, but they are really much too simple. Consider, for example, the trivial case of the description of economic growth—say, measured by national product—as a function of population and per capita productivity. Such a formulation is likely to leave us with the feeling that we must next inquire into the conditions underlying these two mathematical causes.

The designation of a small number of "propensities" may also serve as a starting point for the accumulation and organization of more detailed information on conditions. The term focuses consistent attention on the human element—on man as the principal actor in the economic universe—but it does not really refer to basic psychological entities. (See footnote 12 for references to Maclaurin and Rostow.)

## II. *Nature of Conditions of Technological Progress*

Rather than propose a particular list of conditions which cannot be exhaustive, I shall deal with five broad categories which together comprise the matrix of all conceivable conditions. More precisely, I be-

[12] See, for example, Zweig, *op. cit.*, pp. 167-178; T. C. Clarke, "Engineering," in *Harper's Encyclopaedia of American History* (Harper, 1905), Vol. III, pp. 244-246; Moulton, *op. cit.*, pp. 358-359; S. B. Clough, *The Rise and Fall of Civilization* (McGraw-Hill, 1951), pp. 11, 223; J. J. Spengler, "Theories of Socio-Economic Growth," in *Problems in the Study of Economic Growth*, pp. 52-54; J. M. Clark, *ibid.*, pp. 32-42; D. M. Keezer, "Foundations of America's Economic Greatness," in L. Bryson, ed., *Facing the Future's Risks* (Harper, 1952), p. 251; W. W. Rostow, *Process of Economic Growth* (Norton, 1952); and W. R. Maclaurin, "The Sequence from Invention to Innovation and Its Relation to Economic Growth," *Quarterly Journal of Economics*, February, 1953, p. 98.

lieve that any condition deemed relevant can be restated, if necessary, in terms of entities incorporated in one or more of these categories or in terms of relations involving such entities.

I start with the commonplace that technological progress is the successful outcome of struggle between man and nature. Of course, any particular instance of innovation or diffusion of a new material, process, or product may be shown to involve other struggles—in Bertrand Russell's terms, struggles between man and man and between man and himself. But technological progress is essentially a gain in the two-person game man plays with nature. When progress occurs, the resource-product relationship prevailing at the end of a round of play is considered superior by generalized man to the relationship which prevailed at the beginning.

The conflict between man and nature is fought more directly in a primitive state than in a more advanced one. In a modern society, man employs physical capital and knowledge, which represent previous conquests of nature. He works through institutions—devices peculiarly suited to the accumulation and use of such previous conquests. He takes advantage of the goods, knowledge, etc., of other societies.

But this teleological model would be much too simple if we stopped here. Nature is not merely an anvil upon which man strikes; it strikes back. A nation's institutions are not the passive instruments of its citizenry. Nor does the rest of the world merely minister to one nation's needs. Our categories, intended to apply to serial and long-run change rather than only to one-time and short-run change, contain entities which affect each other, which ifluence and are influenced by technological developments. In short, all the categories interact and are reciprocally related. In the main, however, man hopes to remain master of the complex proceedings, to make the other categories subservient to his will, to improve the net utility potential of the entire system, to improve his position vis-à-vis nature after due allowance for the costs of institutions, etc.

Thus, we may imagine the achievement of technological progress to concern the following five broad categories: (1) man (in his demographic, biological, psychological, and behavioral aspects; in Marshall's words, man as "both the end and an agent of production"); (2) private economic institutions (firms, markets, etc.); (3) other institutions (political, legal, social, educational, religious, etc.); (4) the rest of the world; and (5) nature (living and inanimate resources, climate, and space). We may imagine, for any country, that man attempts to control nature through domestic institutions and relationships with the rest of the world. The number of categories through which man operates could, of course, be enlarged, if required, through subdivision.

The same broad categories would evidently serve for discussion of economic growth and progress as well as technological progress.

The interaction of these five categories may be illustrated in a simple diagram (Figure 1). They form a conceptually complete system in a continually altering state of circular or combinatorial equilibrium. In the diagram, two-headed arrows are used to indicate reciprocal relationships—the two directions of influence of paired categories. They

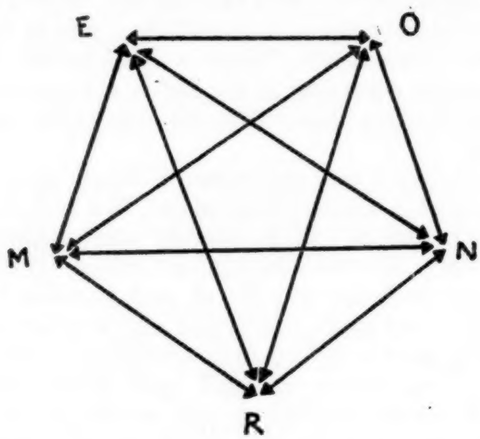


FIGURE 1

RECIPROCAL RELATIONS AFFECTING TECHNOLOGICAL PROGRESS, ONE COUNTRY
M = Man; E = Private economic institutions; O = Other institutions; R = Rest of world; N = Nature

are like the double arrows used in chemical equations to indicate the reversibility of a reaction.[13]

In the remaining two sections of this paper, I shall use the five categories for organizing my remarks on past and future American technological progress. Obviously, a relationship involving two categories may be discussed under either.

## III. *Some Conditions of Past American Technological Progress*

First, I shall say something about the American as producer and consumer. These aspects of his character, studied by our own historians for many years and by a steady stream of foreigners from Crèvecoeur and Tocqueville to the British productivity teams, probably are still as well documented as his sexual behavior. Among the

[13] Our diagram could be discussed in terms of information theory (message versus noise) or servomechanisms (regenerative circuits and loops). For an application of servomechanism terminology to diagrams involving social and other categories, see R. E. Gibson, "The Arts and the Sciences," *American Scientist*, July, 1953, pp. 388-409.

qualities relevant to technological progress which have been attributed to Americans are: mechanical ability, optimism, geographic mobility, industry and frugality, desire for material betterment, responsiveness to money incentives, spirit of enterprise, competitiveness, and such contradictories as the habit of work and desire for leisure, as individuality and conformity, as desire for novelty and acceptance of standardization. Other relevant conditions commonly noted throughout our history include: general scarcity of labor with respect to land and resources, foreign origin or background of the population, and a wide diffusion of (at least basic) literacy.

Most of these qualities require no comment. Mechanical ability was manifest even in the many-sided early political leaders, like Jefferson and Franklin. In his *Report on Manufactures,* Hamilton referred to the common observation that "there is in the genius of the population of this country a peculiar aptitude for mechanic improvements."

Optimism, living with a broad time sense, has almost always been evident at every income level of our population. It underlies the willingness to enter into forward contracts, to buy on the installment plan, to make investments, to save, to spend, to buy durable goods, to marry and have children without state subsidies.

Desire for material betterment is linked to the development of a large internal market for durable and nondurable consumers goods. Interest in new products for consumers originated early. Responsiveness to money incentives is related to desire for material betterment. But money-mindedness also reflects—as Dicey, a British visitor during the Civil War, was keen enough to observe—the comparative absence of caste, ancestry, land ownership, and other outmoded standards of a man's worth. Access to income has in our country been the essential means to a greater variety of ends for a greater percentage of the population. Contention through industry for money, with some hope of success, has minimized the danger of personalization of the conflict in a class struggle. The commutation of other forms of obligation into cash settlements has also meant that the dead hand of the past would exercise less restraint on enterprise.

The spirit of enterprise has always been strong. In the cities it has been nourished by belief in equal opportunity for unequal incomes, whatever the prevailing tax level. It has thrived on the belief and frequent demonstration that community schedules of the marginal efficiency of investment are wrong (too low at the right), especially if they neglect operations performable on the scope of the economy itself; that any apparent equilibrium within the given economic framework is not optimal, for it involves a misallocation of the would-be enterpriser's labor and of the resources he could command. Irrationality

is as important for enterprise as rationality—action on the basis of ignorance rather than knowledge, attention to nominal rather than real money returns, neglect of the alternative true value of the enterpriser's services, etc. But, however we account for the venturer, we cannot doubt his tough-mindedness and inner-directedness, at least in the past.

American competitiveness is related to money-mindedness. But it also reflects the character of our economic and political systems. Ordinary citizens are allowed wide latitude in decision-making—with respect to jobs, purchases, elected representatives, church membership, etc.—and such experience may reinforce the diversity of opinion already latent in the variety of family value systems in which they were raised.

The contradictories mentioned above have commonly worked in favor of technological progress. In our country, the prospect of leisure uses of income has encouraged hard work. Individuality has often taken the form of trying to be different in the same way—the visible ownership of goods of the world. Americans have also accepted standardized goods at lower prices with the knowledge, still not possessed by so many European critics, that variety could be accomplished through variation in the assortment of purchases.

The scarcity of labor with respect to land and resources, once other conditions were ripe for industrialization, contributed in an important way to America's distinctive technological progress. From the very beginning, labor has been expensive in our country and mechanization has kept it so, scarcity and high productivity going hand in hand. We should certainly have had a much different technological record if we had started out with a heavy burden of redundant population on the farms.

People have been America's most valuable import. They brought needed skills, worked long hours before there were powerful unions, and helped build our great domestic markets. Not all were tired, poor "huddled masses yearning to be free." They were adaptable and proved their quality through willingness to migrate away from their families and native lands. Most came in the full vigor of adulthood.

I turn now to the second category: private economic institutions. Despite market imperfections, evidences of wastefulness and short-sightedness, and perennial dangers of overconcentration of economic power in a relatively small number of large firms, resources have on the whole been allocated effectively in the past.

Since firms are the custodians of past accumulations of knowledge and physical capital but at the same time are instruments for enlarging the profit and power of particular individuals, a question naturally arises concerning the achievability of a higher rate of technological progress through some alternative organization of eco-

nomic activity. In other words, could generalized man have done better for himself? Offhand, the answer would always seem to be yes. It is important to ask and try to answer such questions, but it is also doubtful whether historically valid alternatives sufficiently different from the experienced situations could be specified. Perhaps, in the absence of very obviously underutilized resources, all that can be said is that plausible alternatives would have yielded slightly different, but not necessarily superior, results.

The private economic sector has contributed to its own technological progress in ways too numerous to mention. It has continuously, from day to day, provided or participated in the provision of the new conditions for its subsequent advance. In response to felt or anticipated market, union, government, and other pressures, it has typically sought ways to restrain or reduce costs and prices, to improve products, and to increase the variety of output. It has typically sought to reap cost and profit advantages through simplification, standardization, or specialization of resource inputs, processes, and products. It has, through restraint or reduction of prices, expanded markets; and such demand increases have encouraged the adoption of more efficient, larger-scale processes, the diversification of production, etc. It has innovated industries and institutions, through such specialization assuring pathways to higher productivity levels. Finally, through the expansion (in co-operation with government) of scientific and engineering research and development activity, it has been systematically working toward lower real costs and the enlargement of our economic space.

Now, a few words about the contribution made by unions, which may also be regarded as private economic institutions. Some of the actions of labor organizations retard or restrain technological progress, even as some of the actions of firms do. But it should be noted that the recent growth of unionism also has tended to reduce labor antagonism to new machines and methods, to reduce fear of technological unemployment. Of course, a sharp recession could for a time change all this, but the fact remains that unions have been educating their members to the desirability of higher productivity and the concentration of bargaining on the increase of labor's share in the fruits of progress. Unions have also, in effect, been restricting the size of the labor supply available to a particular firm at stipulated wages, etc. This sort of restriction has, as suggested above, goaded firms to improve equipment and techniques in the interest of cost restraint and maintenance of profit margins.

Our third category, which embraces institutions other than private economic ones, is represented in many major conditions of technological progress. For example, government (local, state, and federal), with its vast accumulation of economic power, has generally been

used by its temporary partisan custodians to advance technology in one direction or another in the name of general welfare. Indeed, political parties in our country have agreed as a rule on the desirability of government participation; they have differed more or less on the projects to be sponsored and the form and extent of sponsorship.

On the federal level, the Jeffersonians and Hamiltonians both have had their way, employing government as an instrument for raising the productivity and underwriting the growth of agriculture and industry. Ever since the Civil War the federal government has been supporting agricultural research and education. Other measures to protect the solvency of the farmer—and hence of the nonagricultural sector, too—are well known. Government support of industrial research may be traced back to the beginning of the U. S. Navy and to the musket contract which permitted Eli Whitney to work out the principles of producing interchangeable parts. Federal aid to the universities has been an important factor in the training of scientific and engineering cadres for industry. Numerous other forms of assistance might be mentioned, ranging from tariff and patent protection to antitrust, monetary, and credit programs.

The educational system has made technological progress easier and more likely through its preparation of prospective members of the labor force. In addition to training personnel for different kinds of work, this system—like our mass entertainment media and our newspapers—has instilled a pride in the "American way of life," which, among its other features, sets a high value on material comfort.

Libraries and professional societies have also made a signal contribution. Very early in our national history, the gregariousness of the American manifested itself in a propensity to form not only chowder and marching clubs but also associations for the advancement of learning, the arts, science, and technology.

With urbanization and industrialization, the small, mobile, loosely knit "atomistic" family, as Professor Zimmerman calls it in *Family and Civilization,* has become the dominant American type. The product of technological change, Protestant capitalism, and the separation of the church and state, it has also become an important condition of subsequent technological change. For it has prized material welfare more than children. It has sought to mechanize the home so that it could find more leisure to use its leisure, so that its mothers could work for money income outside.

The fourth category—the rest of the world—has also facilitated our technological development. It has supplied us millions of its most energetic people. It has provided goods to use and to copy. More important, it has provided a huge fund of basic scientific knowledge for

sifting and reduction to practical inventions. It provided capital at a time when the economy had a smaller net product (e.g., for railroad construction). It has provided markets for exports and has offered competition. Finally, war or the threat of war has profoundly stimulated technological change in certain directions, leaving our economic system larger, more potent, and more varied and our labor force more versatile.

The fifth category—nature—provides man's food, raw materials, and workplace. Our great land mass has been richly stored with resources vital to industrial and military power. And even a skeptical British visitor like Dr. Shadwell, who opined that our mechanical triumphs saved trouble but wasted time, had a kind word for the invigorating American climate (*Industrial Efficiency,* 1909). With the passage of time, our nation has become increasingly concerned over the size of various mineral reserves, but fear of exhaustion has characteristically led not to literal conservation schemes but to the application of technology to exploration and economic adaptation of more of the earth's crust.

### IV. *Conditions Shaping the Future of Technology*

Forecasting, always a hazardous occupation in our country, encounters special difficulties in the realm of technology, "where naught abiding is but only change." (See Siegel, *Journal of Business,* July, 1953, pages 141-156.) Anticipation of the future requires a high propensity to assume—and, unfortunately for the "science" of forecasting, that which is assumed may be far from realized. History and present tangible indications must be supplemented by notions concerning the process or path of movement into the future. But it is hard to think in terms of detailed forces instead of a few aggregative variables, to visualize the process as continuous instead of a long leap between two dates. It is also natural to give little weight to contingencies, even though some such events of low probability are certain to occur. The impossibility of taking into account the day-to-day interactions of myriads of forces in numerous places means that important emergent conditions of progress may be overlooked. And such new conditions are the antigens which delay or prevent arrival at a stationary state. It is significant that Schumpeter, whatever his doubts about the future, asserted flatly that "there is no reason to expect slackening in the rate of output through exhaustion of technological possibilities" (*Capitalism, Socialism, and Democracy,* third edition, page 118).

I shall run through the five categories again and note some of the forces shaping our technological future. The evidence clearly suggests that further dramatic progress is in prospect in every major sector of

the economy—that the translation of technological possibilities into technological realities will continue at a vigorous pace.

In the first category, it is difficult to sense any entropy of enterprise. Despite sociological and other arguments which have been offered, any reader of *Business Week* or *Wall Street Journal* knows that we still have an industrial leadership which is far from flabby and a middle management which has not yet become a spineless salariat. Today's high-energy "ulcer set" has different tasks and follows different methods, but it is not therefore qualitatively inferior to the uncouth tycoons, the magnates, the captains of industry, and the robber barons who were born before toothbrushes were important.

The entrepreneurial function shows no sign of decay as Schumpeter's "mechanization of progress" remains only a catch phrase (*ibid.*, pages 131-134). At the frontiers of contemporary industry, new economic space is being cleared by research, but the top executive sponsors are hardly awaiting euthanasia and the research directors do not yet know that their achievements are supposed to be automatic. Indeed, life seems to be no more routine than it was in the competitive jungle of an earlier age: "We have a great many research-minded companies, and each is willing to slit the other fellow's technical throat, perhaps neatly, cleanly, and honestly; nevertheless, no holds are barred in trying to be first in the exploration of new fields, via highly competitive research methods." (R. S. Morse, "New Developments on the Research Front," *Analysts Journal*, May, 1953.)

The quality of labor will most probably remain in fair adjustment with the changing needs of the new technology advanced by defense contracts, by research, and by the very expensiveness of labor. The problems of providing the requisite technical, managerial, and maintenance skills are already receiving attention. The "automatic factory" will come only gradually; so the danger of technological unemployment will be slight despite the advance publicity it has already received. In any case, the displacement of human muscle power and even judgment will continue as automatic control mechanisms are more widely introduced. Higher pay will continue to compensate for lack of job interest, but the redefinition of jobs to restore variety will also become a prominent feature of management efforts to minimize the gap between actual productivity and the rapidly rising potential.

At all income levels, interest in the dollar remains keen despite complaints about the value of money and the level of taxation. The disincentives do not seem to be seriously reducing participation in economic life. Ambition remains widely diffused. It is extremely likely that any higher income recipient tired of serving as a tax farmer would be quickly replaced by a qualified lower income recipient eager to test the burden of progressivity:

For emulation hath a thousand sons,
That one by one pursue.

Man as a consumer, too, will stimulate the development of new industries or the expansion of old ones, especially those serving leisure needs. He will also invite the innovation of new or improved mechanisms permitting fuller utilization of his leisure hours—the increase of leisure-time "productivity" in terms of enjoyment and variety. He will actively affect the present scale or character of industries catering to his needs for housing, furniture, home entertainment, kitchen and cleaning equipment, processed foods, "do-it-yourself" materials and tools, shop equipment, suburban farming and gardening implements, arts and crafts materials, sport goods, vacation travel, private transportation, reading matter, education, etc.

The second category—private economic institutions—will again contribute significantly to its own productivity advance. Evidences of planning for long-term growth are numerous: research, diversification, investment programs extending over several years, increasing interest in business statistics and market analysis, huge advertising budgets (about 8 billion dollars for 1954), etc. In 1953, industry employed about 130,000 research engineers and scientists and performed about 2.8 billion dollars of work on research (about half of this money came from the federal government). Such outlays will eventually increase the variety of goods, processes, and industries. Under government tutelage, an increasing number of firms will learn to think of research as a normal adjunct to goods production.

One of the important implications of research experience will be the wider appreciation that the potential size of the economy depends on the time horizon of investors. Keynes's secular decline in the marginal efficiency of capital with the growing stock of capital could be continually frustrated if investors learn to regard research as a higher grade use of funds. Indeed, many companies now undertake research on new products only if the probable return on investment in commercialization averages more than 30 per cent before taxes over a five-year recoupment period. (See, for example, Stanford Research Institute, *Research for Industry,* December, 1953, pages 5-6.)

Research, high wages, and many years of high profits are among the conditions already raising the productivity potential to new heights. Further mechanization, modernization, and improvement in methods are inevitable throughout the economy. Not only is there a story to be told for each manufacturing industry, but certain general tendencies are observable in all: automatization, instrumentation, better materials handling, office mechanization, etc. Jet and helicopter transportation, titanium and the light metals, chemical agriculture, natural gas, shale oil, continuous coal mining, industrial and medical application of radio-

isotopes, radar, electronic computers, etc.—all will more profoundly affect the character of civilian life in the not-too-distant future.

One condition which could seriously restrain or offset technological progress is the trend toward "social security" within industry—the provision of retirement pensions, hospitalization benefits for workers and their families, school tuition for workers' children, etc. Pressure for a guaranteed annual wage has been mounting. Since such rights are not normally transferable between employers, workers' mobility may become greatly impaired. Still worse, in the event of a serious recession, government support of uneconomic firms would be sought to protect workers' equities. Sooner or later the convertibility of programs between employers, the commutation of equities into cash settlements upon separation, or federalization will have to be considered.

The third category—institutions other than private economic—will certainly make distinctive contributions to future technological progress. The schools of higher learning, for example, will increase the supply of scientists, engineers, and other professionals. Such personnel would then become available even to smaller firms for research and other uses. Furthermore, an impetus would be given by this increase in supply to the establishment of new enterprises (as in the electronics and scientific instruments fields) based largely on the capital of education. The schools will also remain important centers of basic research in medicine, physics, chemistry, and other fields.

The federal government will, as in the recent past, play a strategic role. It will continue to demand a substantial share of the private sector's output, helping new industries achieve eventual commercial status in the civilian economy. It will continue to develop atomic energy for ultimate private exploitation and use. It will continue to support research. Its 1953 contribution for work done in government, industry, and nonprofit institutional laboratories totaled about 2.5 billion dollars. It will actively support technological progress in other ways—tax and other subsidies to industries, credit and stabilization policies, water and power projects, educational aids, small business assistance, antitrust law enforcement, etc. Sooner or later, it will open up still another large area for private enterprise—foreign investment—probably guaranteeing against loss through nationalization, etc.

State and local governments will also contribute to technological progress in various ways. With federal aid, they will finally attempt to catch up with the advent of the automobile and improve the highway system substantially. They will also provide heliports, airports more suitable for fast jet planes, tax and other inducements to industry, etc. They will redevelop cities, facilitate suburbanization, and build more schools to keep up with the rising population.

The fourth category—the rest of the world—will influence our technology whether cold war or old-fashioned peace prevails. Europe will still provide useful ideas for American firms and laboratories. Threats from abroad will encourage continuation of domestic research and other stimulants to industrial modernization and innovation. Friendly countries will probably receive substantial private capital assistance from the United States for industrialization. Still later, they might benefit from programs to extend atomic energy to countries poor in conventional fuels. In both of these path-breaking endeavors, the federal government would assume a major role as promoter and guarantor. Obviously, the enlargement of our economy through extension of long-term foreign credits, gifts, or unilateral trade would itself defer the choking of technological advance by autarchic tendencies generated by such advance (an unhappy outcome anticipated by Zweig, *op. cit.*, page 198).

In the fifth category—nature—the basic future problem is the adequacy of various important materials, like petroleum and metallic ores. But neo-Malthusianism with respect to resources is probably unwarranted. Technology will provide new sources or substitutes, though probably at rising real costs. In any case, the problem has been well publicized by the President's Materials Policy Commission and will receive the continuing attention of the Bureau of Mines and non-government agencies like Resources for the Future. Water and air pollution will also receive more attention; and the waste of efficiently produced farm output is dramatic enough to inspire some sort of remedy. It is pleasanter to record that important progress toward understanding photosynthesis is likely, with important consequences for the harnessing of solar energy in our renewable resources.

In conclusion, I wish to make two remarks. First, it is apparent that three "autonomous" sources of expansion exist in our society: in the leisure demands of the household sector, in the research activities of industry, and in the varied promotional, entrepreneurial, and regulatory functions of government. I propose that, for the analysis of economic growth and economic and technological progress, we either abandon Colin Clark's procrustean threefold classification or modify it explicitly to include quaternary, quinary, and sixth-order industries. Second, it is apparent that impressive gains will be made in productivity, potential and actual; but much of the surplus will not be translatable into economic welfare. Indeed, the rates of technological and economic progress may increasingly diverge. Part of this gap, however, would reflect the failure of a measure of economic welfare (as defined) to take direct account of the anticipated improvements in health and life expectancy.

# TECHNOLOGICAL PROGRESS IN SOME AMERICAN INDUSTRIES

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I have taken as my term of reference the questions raised by Professer Ellsworth in suggesting the topic for this session: Do large corporations insure steadier and/or more rapid technical progress, or is the trend toward greater conservatism?

Thirteen different American industries will be compared over time. I should hasten to add that for most of these industries the data on "progressiveness" are essentially qualitative. And they are also impressionistic. While I know one or two of the industries intimately, I do not pretend to have an equal *expertise* on all of them. Yet for present purposes it seems desirable to take a wider sweep than current knowledge perhaps justifies in order to stimulate discussion and more precise quantitative analysis later.

As a second qualification to the title of the paper, progress is defined here as the introduction of important new or improved products or processes. Again, I hope to follow Professor Ellsworth's idea when he asks for a comparison of "major innovations under competitive conditions in the early years of the automobile industry with the apparently minor changes since the industry has become monopoloid." The American automobile industry would probably deny that the changes it has made in the last twenty years—i.e., since 1933—are comparatively minor. But I feel with Professor Ellsworth that they are.

Therefore, I propose to start with certain assumptions concerning the technological progressiveness of the industries under consideration. We will then take up some of the causal reasons. But it must be understood that until American industries themselves become more self-conscious about the question of how technologically progressive they are and set out seriously to assemble information from their performance to explain their record, we shall have to do the best we can with inadequate data.

## *The Measurement of Progress*

It is perhaps of sociological significance to note that, despite all the lip service given to American industrial progress and all the advertising that has been focused on novelty, the records which industries keep of

their own technological performance are far less satisfactory than their records on almost every other aspect of their business. The reason may be that well-informed outside stockholders of large corporations, representing, say, a large investment counsel firm or an investment trust, have not requested the executives in charge of engineering or research to give a written account of just what technological changes their firms have introduced over, say, a twenty-year period.

But if we did have the data, how would we measure technological progress? It depends on what we are interested in and what we hope to accomplish. Since I am impressed with the importance of a large volume of new investment in advanced economies for the furtherance of growth and the maintenance of stability, the aspect of technological progress which I have tried to assess is that which leads to the opening of major new investment outlets. According to this definition, therefore, an industry is not likely to show a high rate of technological progress if its research and engineering are directed primarily to refinements in existing products rather than to radical improvements or the creation of entirely new products or processes.

New products and processes can be listed and an effort made to measure their impact on investment. More difficult is the task of determining whether a series of small technological changes does not have an equally important effect in shifting demand curves and thus creating new investment. Suffice it to say that in this paper the rating of technological progressiveness is weighted in favor of major changes. Thus house assembling in tracts is given a low technological rating because I believe that the major increase in new investment in this industry has been caused much more by population shifts and financial aids to housing than by improvements in technology.

The thirteen industries selected for analysis are listed in Table 1 in order of my rating of their technological progressiveness. To assemble this table I have listed (but not included here because of its bulk) the most important new products or processes introduced by the industry in the period from 1925 to 1950, based on discussions with experts in each industry. And I have given more weight to developments introduced from 1935 to 1950 than to those introduced from 1925 to 1935. Inevitably, moreover, because of the characteristics of the data available, the final rating is subjective. Though not a representative sample of all American industry, the industries chosen cover a wide field and many of them differ quite radically in type.

Industrial definitions are not always sharp, and there may be some question as to just what is included in each of these industries. But when in doubt I have tried to use the designation which conforms to usage in the industry. In the case of chemical manufacturing, the

significance of the qualifying designation "heavy" is that it requires a large capital investment to produce heavy chemicals like sulphuric acid. But the leading companies have used their established position in heavy chemicals to pioneer in other fields: nylon, prestone, etc.

In the second column I have asked whether the industry had a research conception which can be identified by its actions in the twenties. If the top management of one or more of the leading companies had

TABLE 1

TECHNOLOGICAL PROGRESSIVENESS, 1925–50
(Rating Based on Introduction of Important New Products or Processes)

| | Research Conception (1929) | Number of Patents Issued | Number of Scientists with Doctor's Degrees |
|---|---|---|---|
| *Highest Rate of Progress* | | | |
| Chemical manufacturing (heavy) | Yes | High | High |
| Photographic manufacturing | Yes | High | High |
| Airplane manufacturing* | No | Medium | High† |
| Oil refining | Yes | High | High |
| *High Progress* | | | |
| Radio and television set manufacturing | Yes | High | High |
| Electric light manufacturing | Yes | High | High |
| *Medium Progress* | | | |
| Automobile manufacturing | No | Medium | Medium-low |
| Paper manufacturing (except newsprint) | No | Medium | Medium-low |
| Steel | No | Medium | Medium-low |
| *Lower Progress* | | | |
| Food processing | No | Medium-low | Medium-low |
| Cotton textile manufacturing | No | Low | Low |
| Coal mining | No | Low | Low‡ |
| House assembling in tracts | No | Very low | 0 |

* Progress has come primarily through government funds.
† Primarily since 1940.
‡ U. S. Bureau of Mines has considerable number of Ph.D.'s.

established a research department specifically charged with the responsibility of creating new products or major changes in processes and if that department was permitted to play an important role in the company, the industry is reported as having a research conception in 1929. Where, however, the company's research emphasis was almost exclusively on the engineering improvement of existing products—as in the automobile industry—it is reported as not having a research conception. In the third and fourth columns the number of patents issued in the industry and the number of scientists with doctor's degrees employed by the industry are rated high, medium, and low, based on the data I could find.

My personal belief is that the presence or absence of a research con-

ception is much the most important of these columns, because top management in industry tends to get what it wants. But patents are a protection to investment in research and in most fields research-minded companies have a large number of patents. It would be possible, however, for an industry to protect its research primarily through secret processes. In the chemical industry both patents and secrecy are relied on, the effort being made to disclose as little as possible in the patent. There are also employment contracts used, forbidding the transfer of

TABLE 2

MONOPOLISTIC FEATURES*—1950

| INDUSTRY | SIZE OF PRICE LEADERS | EASE OF ENTRY |
|---|---|---|
| *High Monopolistic Qualities* | | |
| Chemical manufacturing (heavy) | Large | Very difficult |
| Automobile manufacturing | Large | Very difficult |
| Steel | Large | Very difficult |
| Oil refining | Large | Very difficult |
| Electric light manufacturing | Large | Difficult |
| Photographic manufacturing | Large | Difficult |
| *Medium Monopolistic Qualities* | | |
| Radio and television set manufacturing | Large and medium | Easy† |
| Food processing | Large and medium | Medium to easy |
| Airplane manufacturing | Large | Easy‡ |
| *Low Monopolistic Qualities*§ | | |
| Paper manufacturing (except newsprint) | Medium and small | Medium to difficult |
| Cotton textile manufacturing | Medium and small | Medium |
| Coal mining | Small | Medium |
| *Lowest Monopolistic Qualities* | | |
| House assembling in tracts | Small | Easy |

* As defined above.
† Because of licensing policy.
‡ Because of government contracts.
§ The opportunity to control prices is more limited in these industries, though it certainly may exist in specialized situations.

certain groups of employees from one company to another for a period of years.

In connection with the last column—scientists with doctor's degrees —it must be recognized that the doctor's degree is much more common in chemistry, physics, chemical engineering, and electrical engineering than it is in mechanical engineering, civil engineering, and mining. Nor can it be argued that a doctor's degree is essential to effective research. Yet I believe that the additional advanced training is more likely to develop men who are dedicated to research. And, conversely, an industry that makes no attempt to attract and maintain a group of professional scientists with the most advanced training possible is missing out on one important source of ideas for new developments.

*Elements of Monopoly*

Table 2 relates technological progressiveness to certain elements of monopoly, with 1950 as the standard for comparison. Two questions have been asked: (1) Are the firms that determine the prices which the industry usually follows large—sales of over 100 million dollars a year; medium-sized—sales of 25 to 100 million a year; small—sales of less than 25 million? (2) Is the industry very difficult to enter, mediumly difficult to enter, easy to enter? On this latter question, principal weight has been given to the capital requirements of entry and the patent position and licensing policy of the industrial leaders.

In certain respects I am unhappy about presenting this table because it would be inappropriate for me in this paper to spend the time necessary to explain and justify each designation. But I am prepared to defend the thesis that technological progressiveness cannot be correlated directly with the monopolistic features that I have singled out. It seems clear that other more important forces determine the nature and rate of technological progress in a particular industry. On the one hand, I have attempted to conclude elsewhere (see my *Invention and Innovation in the Radio Industry,* 1949) that some degree of monopoly is essential to technological progress; and on the other that some freedom of entry and the spirit of competition are stimulating to progress.

Nevertheless, it is a fact that, whether or not large firms do as Schumpeter suggested—"create what they exploit"—large firms now play a far more important role in the structure of the American economy than they did in 1850. Therefore Professor Ellsworth has certainly asked an important question when he wants to know what we can expect technologically from these giant companies.[1] My answer is, "It depends." And I should like to devote the balance of this paper to discussing some of the forces which have to be considered.

*State of the Engineering Art*

Pure science (i.e., science pursued without practical objectives consciously in mind) has a life of its own which is largely independent of the industries which may eventually make use of its discoveries; and, with the growth of the engineering schools in America and the increas-

[1] Some indication of the importance of the role of the large corporation today in research is indicated in a recent survey of industrial research published by the Bureau of Labor Statistics in Bulletin No. 1148, *Scientific Research and Development in American Industry: A Study of Manpower and Costs* (Washington, 1953). In January, 1952, "approximately 40 per cent of the surveyed research engineers and scientists worked for the 44 largest companies, each of which had at least 25,000 employees. These companies represented only 2 per cent of the 1,953 organizations in the study. Two-thirds of the research engineers and scientists were employed by the 222 companies (11 per cent of the total) with 5,000 or more employees" (pp. 6-7).

ing importance of government-sponsored research, applied science may also have a life of its own.

In Table 3 our thirteen industries are listed in relation to the branch of engineering which is closest to their work; and in doing so I have also attempted to list the applied sciences in the approximate order of their age as separate and established disciplines.

It is obvious, of course, that more than one science is relevant to each industry. What I have attempted is to suggest the particular applied science which has in fact been principally brought to bear on the development of the industry in the last fifty to seventy-five years.

By and large, the newer applied sciences, especially those which have come into being since about 1890—i.e., electrical engineering, chemical

TABLE 3

| Engineering Art | Industry |
|---|---|
| Architecture and civil engineering | House assembling in tracts |
| Mining engineering | Coal mining |
| Mechanical engineering | Automobile manufacturing |
| | Cotton textile manufacturing |
| | Paper manufacturing |
| Metallurgy | Steel |
| Electrical engineering | Electric light manufacturing |
| | Radio and television set manufacturing |
| Chemical engineering | Chemical manufacturing (heavy) |
| | Oil refining |
| | Photographic manufacturing |
| Aeronautical engineering | Airplane manufacturing |
| Biological engineering* | Food processing |

* A very new engineering profession.

engineering, and aeronautical engineering (I think this could also be said of biological engineering, except that the field as defined is so new that there are only a very few practitioners, and they have not had much chance to achieve importance)—have a stronger link with science than the older applied sciences with long-established traditions of their own such as architecture, civil engineering, mining engineering, and mechanical engineering.

Architecture and civil engineering as respectable professional activities have a very ancient tradition. There were architects in all the early civilizations where there are extant monuments. And civil engineers built the great Roman aqueducts. But architecture today is distinctly unscientific as a profession. To a very considerable extent every new building is a laboratory experiment conducted with exceedingly crude scientific concepts. And while the civil engineers have made serious efforts in recent years to improve the quality of their science, it remains a fact that the scientific techniques available to large-scale house builders on such vital problems as water supply, sewage disposal

systems, and road building leave much to be desired. It is not surprising, therefore, that professionally trained architects and professionally trained civil engineers[2] have rarely been employed by house-assembling enterprises except in very subordinate or purely consultative capacities.

By way of contrast, the chemical industry and oil refining were among the first industries to become thoroughly infused with the scientific spirit. Beginning about 1900, the leaders of these industries began to bring into their firms young men who had had a good grounding in science and engineering. Nor was it surprising that in a rapidly expanding field these men should rise to positions of entrepreneurial leadership. This success was particularly notable in the oil industry, while in the chemical industry the story is complicated by the fact that there has been more of a dynastic tradition and the young technically trained leaders were in a number of instances descendants of the older entrepreneurs who had been sent to engineering school for professional training.

### *Entrepreneurial Leadership*

I should therefore like to add another classification, relating to the source of entrepreneurial leadership, as follows: (1) artisan entrepreneurs; (2) inherited management (with a tendency more notable in 1925 than in 1950 for absentee ownership); and (3) entrepreneurs with an engineering or scientific training. It is my impression that entrepreneurs with a professional business training in the period under review have had a more conspicuous impact on finance and trade than on manufacturing.

In applying this very rough classification to our industries, we must recognize that every industry has a large number of different entrepreneurs. I have made lists of these entrepreneurs, and in Table 4 have tried to suggest the type which seems to have been most influential in giving the industry its particular character from 1925 to 1950.

With these admittedly crude tools of analysis, what more can be said concerning the probable influence of the large corporation on technological progress? We must recognize that there can be no simple answer when complex forces are at work.

How, for example, does one explain the fact that the Du Pont Company has a research conception built into its top-management structure, while General Motors does not? Both concerns have been operating in essentially new industries; both have very large resources at their command to support the most fundamental research. But in the period from 1925 to 1950, General Motors was far more concerned with style

[2] I mean by this graduates of an engineering school of recognized standing. There is some difficulty with the nomenclature of civil engineers because the surveyor calls himself a civil engineer, although he is rarely a graduate of an engineering school.

changes and engineering improvements than with fundamental research on transportation, whereas Du Pont was pioneering in nylon, plastics, and many other new products.

There are several partial answers suggested by our analysis. The first is the more traditional character of the underlying professional science, mechanical engineering, as compared with chemical engineering or electrical engineering. Thus, I suspect, the automobile industry would have been quick to accept new techniques for semiautomatic factories if they had been worked out in detail. But the field of servomechanisms, of which such automatic devices are a by-product, has been pioneered by electrical engineering—primarily with government funds and in the main for military use.

TABLE 4

ENTREPRENEURIAL BACKGROUND, 1925–50

| | |
|---|---|
| 1. Artisan entrepreneurs | House assembling in tracts |
| 2. Inherited management | Coal mining |
| | Cotton textile manufacturing |
| | Food processing |
| | Paper manufacturing |
| | Steel |
| 3. New entrepreneurs with an engineering or scientific training | Airplane manufacturing |
| | Electric light manufacturing |
| | Photographic manufacturing |
| | Radio and television set manufacturing |
| 4. Combination of first three | Automobile manufacturing |
| 5. Combination of inherited management and engineering training | Chemical manufacturing (heavy) |
| | Oil refining |

And the automobile industry, in staffing its research and engineering departments, has relied primarily on mechanical engineering. This profession had a tremendous growth and development in the second half of the nineteenth century. By 1900, mechanical engineering departments were well established in all the principal engineering schools and the leading professionals were men of considerable empirical understanding but a somewhat limited scientific background. The great struggle of the mechanical engineering profession in recent years has been to instill a more scientific spirit of inquiry.

Another explanation relates to the quality of entrepreneurial leadership from 1900 to 1925 and its carry-over into the next quarter-century. Entrepreneurial forces take time to work out. Vigorous leaders of one period place a stamp on their institutions which their successors change only slowly. The dominant figure in the automobile industry from 1900 to 1925 was Henry Ford. He represented the best type of artisan-entrepreneur in that period. He was an excellent mechanic and had remarkable energy and intuition; but his education was limited and he

had no occasion to think seriously about scientific research. The automobile industry from 1900 to 1925 had an explosive technological growth in which the principal participants were very successful. Henry's son, Edsal, with the leisure for reflection made possible by his inheritance and education, could have made some important changes but he was never given the freedom by his father that his position would normally command.

Moreover, the rate of growth of the automobile industry was so rapid that a period of gestation was in order. In General Motors, during the "second stage" (1925-50), Alfred Sloan, with a professional training in engineering, brought concepts of orderly engineering development and sound management to the industry; and he encouraged men like Kettering to do the research which the company thought appropriate. In the historical and environmental circumstances, such research was almost bound to be conservative rather than radical. For what American automobiles needed from 1925 to 1950 were the refinements necessary to produce the comfortable, high-speed, and very dependable passenger automobile of today. Otherwise we should all be traveling in Model T's; and, despite the sentimental attraction of this, if you try out a well-restored 1925 vintage today, you will get very weary of it after thirty or forty miles.

In the Du Pont case the chemical industry had been in existence all during the nineteenth century, and the first great growth period occurred earlier than in the automobile industry—from 1875 to 1900. The Du Pont Company was already a flourishing enterprise when four great-grandsons of E. I. du Pont de Nemours were sent by their families to engineering school. These grandsons did not inherit the company in a direct line of succession, but moved into it in 1902, when a relative, Eugene du Pont, died suddenly. Each of the four engineering graduates became in turn president of the Du Pont Company from 1902 to 1940. Coleman, the eldest, became president in 1902 at the age of thirty-eight. His cousins who joined him in the top-management group and later succeeded him as president were Pierre, Irénée, and Lammot du Pont. There was a world of difference between the background and training of these well-to-do Du Pont engineer-entrepreneurs and the artisan-entrepreneurs who dominated the automobile industry from 1900 to 1925.

Enterprises, even though they become giants, still reflect in very large measure the goals and concepts of their institutional leaders, and their professional training. The Du Pont Company saw that its future lay in science and set about producing an environment in which scientists would flourish. The new Du Ponts of 1902 also had the advantage that the company they acquired had the broad objective of chemical manu-

facturing rather, say, than "explosives," and chemistry and chemical engineering were in a path-breaking era as scientific professions.

The influence of inheritance has shown a less satisfactory performance in cotton textiles than in chemicals. From 1900 to 1925, for example, there was a strong tendency for the sons and grandsons of textile entrepreneurs to run their mills as absentee owners. If the decision had been made early enough and if the owners had known where to turn for technical assistance, the accumulated profits of the good years would have been more than adequate to develop significant new products which could have permitted some of these enterprises to escape the perennial gale of competition and regain their former leadership. There is no a priori reason why some enterprising member of the cotton textile industry should not have defined the objectives of his company sufficiently broadly to include research on new fibers as part of his conception. And if he had determined to do it, nylon and orlon could have been produced by the textile industry rather than by the chemical industry. But the textile entrepreneurs were never indoctrinated with concepts of scientific progressiveness. And they were limited again by the definition of their industry: cotton textiles. In these circumstances, such technical contacts as they developed were with the divisions of textile technology of mechanical engineering departments rather than with chemistry and chemical engineering.

The scientific entrepreneurial goal which I am suggesting is exemplified in recent years by the Polaroid Corporation. Edwin Land, trained as a physicist, has taken the view that the objectives of his company are to explore "the relations between light and matter." It was the breadth of this conception which made it possible for his concern to make pioneering contributions to the photographic art with his picture-in-a-minute camera and to the motion-picture industry with three-dimensional photography. There is no reason why the motion-picture industry should not have pioneered in this latter development, except that it did not have any such basic conception of its function. And in the photographic industry, if the Polaroid Corporation should become a very large enterprise, so long as Land remains the dominant figure and vitally active in company affairs, its research is not likely to be conservative.

Polaroid, however, is protected from competition by patents. Where an industry comes closer to the classical definition of perfect competition, as in tract house building, entrepreneurs have greater difficulty in being technologically progressive. They must seek some elements of monopoly through their land acquisitions and through the creation of a differentiated product. This is happening, but progress has been slowed up by the inadequacies of the underlying professions and the lack of

advanced education of the artisan-entrepreneurs who have been characteristic of the industry until quite recently.

### *Conclusions*

Technological progress must be considered in its historical setting. There have been tremendous advances in science and engineering in the last 150 years, but the application of these advances to different sectors of the American economy has been quite uneven. Although in comparison with underdeveloped countries the United States might appear to maximize the propensity for technological innovation, it does not in fact do so.

Technological progressiveness, therefore, is not a continuous automatic stream; and the "invisible hand" can be nudged in a number of useful ways.

Given time, we might expect that the highly creative spirit of professional scientific inquiry which has characterized the chemical and electrical engineering professions in the last fifty years would spread with equal vigor to the older engineering arts. But the fact is that in the short run, at least, war and preparations for war have increased rather than decreased the distortion. The production of atomic energy weapons has been taken over increasingly by the chemical engineers, guided missiles are in large measure an electrical engineering application, and the design of airplanes of higher and higher speeds and power have given a great boost to aeronautical engineering.

A recent study of scientific research in American industry conducted by the Research and Development Board indicates that approximately half of all research engineers and scientists employed by industry in January, 1952, were on contract research with either the Department of Defense or the Atomic Energy Commission (Bureau of Labor Statistics Bulletin, No. 1148, *op. cit.*). But research in the automobile industry, the food industry, and the paper industry was almost entirely financed by the industry itself. In other words, governmental support is not going toward research in industries which are close to consumer needs. This might lead one to ask whether the strength of the nation is not more dependent on spreading than on concentrating research. Without conscious counterbalancing, the tendency is to give more and more contracts to institutions that have done well on previous contracts.

On the encouraging side, there is evidence that monopolistic concerns are becoming more research-conscious. The decline of the artisan-entrepreneur, the decline of inherited management as a primary source of entrepreneurial leadership, and the rise of professionally trained entrepreneurs to positions of high responsibility in an increasing number of industries are a stimulus in this direction. Furthermore, the nation

is becoming more research-minded. This means that almost every large company today is giving at least some vague thought to the possibilities of a research program.

It still remains true that great numbers of concerns with substantial assets have no idea what research is or how to go about it; but they are being sensitized to its importance. The courts in antitrust proceedings are beginning to ask monopolists whether they do research and what they have accomplished. It would seem desirable if the Department of Justice itself thought more about this question in selecting cases to attack. But that is yet to come.

Technological progressiveness is also being stimulated by the new venture capital investment concerns which have sprung up since World War II. These enterprises have almost all been technologically-minded, and have helped to launch new ventures of a scientific character which presumably would not have been able to get capital otherwise. And while this movement is still small, it is penetrating into hitherto unexplored corners of old industries, such as food processing.

Yet my belief is that the pulsating force of technological growth will continue and the rate of change will vary considerably between one sector of the economy and another. The best long-run correction for this destabilizing influence is through more informed industrial self-regulation, more informed governmental regulation, and more informed governmental support. As for industrial self-regulation, the need is for business enterprises to define their objectives more broadly, to become more self-conscious of their investment growth curves, and to think through their problems of research management in relation to continuity of growth. My own conviction is that any industry today which fails to incorporate a research conception will languish and die. The inclusion of such a conception into an industrial structure seems to me more important, both to the industry itself and to the public, than the degree to which the industry is monopolistic.

## DISCUSSION

Walter Adams: At the outset I must warn you against Professor Maclaurin's potentially dangerous (i.e., radical) assertion that technological progressiveness cannot be correlated directly with monopoly or bigness. To be sure, Maclaurin concedes that some degree of monopoly is essential to technological progress; but he goes on to say that free entry and the competitive spirit may also be important stimulants. To the apostles of bigness so eclectic an approach must smack of rank deviationism. To the nation's vast television audience, the Maclaurin thesis must seem to defy what every red-blooded American is rapidly coming to believe; viz., that better things for better living can be had only through bigness. Fortunately, however, Maclaurin is not beyond redemption, for he ends up with the conclusion that the presence of a research conception among the corporate giants is more important to the public welfare than a competitive industrial structure.

Maclaurin's paper is a signal contribution to the study of innovation in selected industries. It is a commendable venture into an essentially unexplored field. My main criticism of the paper is its de-emphasis of policy considerations. Maclaurin never faces up to the central issue of how to promote progress without permitting technology to become an instrument of industrial monopoly. I shall, therefore, attempt to supplement Maclaurin's remarks with a brief policy-oriented discussion.

1. Is the inclusion of a research conception into an industrial structure more important, both to the industry itself and the public, than the degree to which the industry is monopolistic? Maclaurin suggests that it is, although one might find it difficult to judge the progressiveness of a monopolist. As a competitor of General Electric once put it: "Almost any horse running alone around a track looks fast. To determine his actual speed, he must be paced."

Our past experience, while fragmentary, indicates that monopolized technology is not an unmixed blessing. Thus we know that under international cartel agreements, patents frequently served not as an incentive to investment but rather as a device for limiting production, establishing restricted market areas, limiting the rate of technical advancement, fixing prices, etc. We know that the prewar Standard Oil-I. G. Farben marriage seriously retarded the development of a synthetic rubber industry in the United States. We know that Standard's concessions to Farben were, in large part, motivated by a desire to suppress the synthetic gasoline patents outside of Germany. We know that Du Pont's arrangements with I.C.I. resulted in a division of world markets rather than a dynamic, competitive development of these markets.

The investigations of the Bone, Kilgore, and Truman committees in the early forties demonstrated that the research-mindedness of corporate giants does not always redound to the benefit of the public. These investigations revealed—though we seem since to have forgotten—that when Du Pont developed a pigment which could be utilized either in paints or as a textile dye,

the director of one of its research laboratories wrote: "Further work may be necessary on adding contaminants to 'Monastral' colors to make them unsatisfactory on textiles but satisfactory for paints." The investigations described the Rohm & Haas research effort to discover a contaminant which would make methyl methacrylate suitable for use as a commercial molding powder but unfit as an ingredient for dentures. The investigations told of the heroic effort by the General Electric research organization to shorten the life of flashlight batteries, etc.

If all this be now dismissed as muckraking, let me cite more "respectable" evidence on an industry which Maclaurin rates as highly progressive: the electric lamp industry. It is evidence from a study by Arthur A. Bright which Maclaurin sponsored at M.I.T. According to Bright, "the lack of strong competitive pressure at most times permitted General Electric to concentrate its attention on improving the older incandescent lamp, which would not endanger its established interest in the status quo. My own conclusion, therefore, is that General Electric's control over the lamp industry has not provided an ideal environment for the rapid development and introduction of major new light sources." (*The Electric-Lamp Industry,* page 456.) Obviously, and quite understandably, General Electric was reluctant to push the newer developments in fluorescent lighting lest it compete against itself.

While Bright expresses general satisfaction with the technical advances in the electric lamp industry, he states that a more competitive industrial structure would have resulted in even greater technical progress. Although Bright found no evidence of outright suppression of important patents, he concluded that "patent ownership or patent agreements gave General Electric power to speed or retard the commercial application of certain new devices. That power almost inevitably led to policy decisions based on profits rather than on maximum public benefits from the new technology" (page 470). It would seem that in the lamp industry, at least, the protection of the public interest against the abuses of patent monopoly depended—Schumpeter to the contrary notwithstanding—on the antitrust activity of the Justice Department and the patent decisions of the courts rather than on any safeguards inherent in our patent laws.

2. How significant are patents in promoting research and invention? In this connection it is noteworthy that in 1940, according to Professor Gilfillan, the federal government financed 19 per cent and industry 68 per cent of organized research in the United States. By 1947, however, this picture had changed drastically: the federal government paid 62 per cent and industry only 32 per cent of the organized research bill. All noncommercial sources combined accounted for about 63 per cent of the applied and 95 per cent of the basic research. Gilfillan suggests that invention has, by and large, followed the path of science, and estimates that the patent motivation accounts for only about 15 per cent of today's inventions. On the basis of these facts, Gilfillan concludes that "the incessant ballyhoo by patent lawyers and their friends that the patent system is the fount of all inventive progress, needs a great transformation to attain truth." ("The Prediction of Technical Change," *Review of Economics and Statistics,* November, 1952, page 377.) The policy

implications of Gilfillan's findings are a clear challenge to Maclaurin's conception of the inventive process. While the impact of government research differs in different industries and while the government's research role in the future may—with a return to normalcy (?!)—be less important than it is today, the student of public policy cannot ignore Gilfillan's doubts on the efficacy of patents as a stimulus to invention.

3. Is exclusive patent control essential to assure full use of an invention, especially where sizable funds are required for commercial development? In other words, is the patent grant a necessary stimulus to innovation (as distinct from invention)? This probably is, as Judge Jerome Frank suggests, the crucial question of public policy.

Dr. Vannevar Bush has argued that, without patent protection, the incentives for innovation would be seriously reduced. Maclaurin would, I presume, agree with this position. Yet the government's patent experience during World War II may justify quite different conclusions. Thus it is significant that between 1942 and 1945 the Alien Property Custodian offered to grant exclusive licenses on enemy patents to:

> . . . applicants who could demonstrate that exclusive rights are necessary for the fullest exploitation of the technology. Only seven applicants filed preliminary requests for exclusive licenses, alleged to be necessary to recoup "development costs," but none of those ever filed a final application for an exclusive license or made the requisite showing of need for such a license. Some of these seven applicants were in fact content with nonexclusive licenses. The Custodian recently reported that his policy of nonexclusive licensing has been eminently successful [about 1,800 such licenses were actually issued], and that a large number of improvements upon the licensed inventions have resulted from their manufacture and use by many concerns rather than by a single licensee. (D. L. Kreeger, "The Control of Patent Rights Resulting from Federal Resarch," *Law and Contemporary Problems*, Autumn, 1947, page 740.)

It is also noteworthy that the live-and-let-live patent practices of the automobile industry have not—despite the carefully nurtured myth to the contrary—removed the incentives for innovation and investment. In fact, the auto industry's patent sharing has contributed to that spectacular cost reduction which has made the automobile the mass-produced and mass-consumed article it is today. As one writer put it:

> The automobile industry is not a unique exception which proves the rule, but rather an unanswerable deliverance of experience which contradicts the thesis that without monopolistic patent structures industrial advancement cannot occur. (C. A. Welsh, "Patents and Competition in the Automobile Industry," *Law and Contemporary Problems*, Spring, 1948, pages 276-277.)

Finally, it should be observed that patents are a subsidy to encourage the commercial development of inventions. Since, however, the patent grant subsidizes the nonuse as well as the use of inventions, it is debatable whether patents are the most appropriate form of subsidy to achieve the desired goal of increased innovative activity.

4. Should a corporation doing contract research for the government receive patent rights on inventions developed at public expense? Those who say "yes" argue that leading private research laboratories would be reluctant to accept government research contracts unless they were given the commercial rights to

resulting patents; or, if they did accept the government contracts, they would do so at exorbitant fees.

Though inconclusive, the evidence shows that during World War II, 99 per cent of War Department and 100 per cent of Navy Department research contracts left patent rights with the contractor. By contrast, the Quartermaster Corps—when it adopted an opposite policy—was obliged to grant a similar concession in only about 50 per cent of its research contracts. Moreover, "the Rubber Reserve Company was uniformly successful during the war in sponsoring research in the synthetic rubber field, under contracts which gave the Government the power to throw open the resulting inventions to the entire industry." (Kreeger, *op. cit.*, page 743.) TVA, the Atomic Energy Commission, the Departments of Interior and Agriculture have always insisted, and quite successfully, on the government's right to license any and all comers under patents resulting from publicly-financed research. If such a policy were uniformly adopted and affirmatively enforced by all government agencies, it is doubtful if leading private laboratories would refuse to co-operate.

As to the cost of government-financed research, World War II experience indicates that whether the government or the contractor obtained the commercial patent rights, the compensation formula was the same; viz., actual costs plus a percentage of the direct labor costs as an overhead allowance (100 per cent of the direct labor costs for industrial and 50 per cent for institutional contractors). Thus the research and development contracts of the Rubber Reserve Company and the Defense Plant Corporation which opened resulting inventions to industry at large were let on the same terms as the contracts of other agencies which carried no such stipulation. But even if the cost had been higher, query whether the increased cost is not preferable to permitting the contractor to exact a royalty for the invention's use, or permitting the contractor to protect his stake in older processes by suppressing the invention altogether.

With the government's growing role in research, these problems must be resolved in a manner which will promote research without throttling competition. The Attorney General's three-volume report on the subject, submitted in 1947, as well as our experience under the Atomic Energy Act, may serve as useful guides in the formulation of policy in this area.

My general conclusion on the relationship between size of firm and technical progress is that Maclaurin has overemphasized the significance of monopoly as an incentive for innovation. On the basis of past experience—fragmentary though it is—I would say that the maintenance of competition is imperative if innovations are to serve the public welfare. Reliance on enlightened stewardship is a relic of the Middle Ages and is neither safe nor democratic.

Hans Brems: In microeconomics there has been in the past, I believe, too much emphasis on price competition, for in the absence of technological change there are very, very narrow numerical limits to price reduction by the firm. By contrast, as a consequence of process innovation, the reduction of unit cost and price may be numerically very large indeed. For example, in the rayon industry output per man-hour increased tenfold between 1925 and 1938. And

as a consequence of product innovation, the improvement of product performance may be equally impressive, numerically speaking. The automobile tire of 1937 had eight times the mileage of the 1921 tire. The fluorescent lamp of 1942 produced fifteen times as many lumens per watt as the incandescent lamp of 1906. The sky alone seems to be the limit, and Schumpeter had a point when, in contrasting innovation with price competition, he said that the former "is as much more effective than the other as a bombardment is in comparison with forcing a door. . . ."

Taking for granted that technological progressiveness is desirable, Professor Maclaurin in his stimulating paper discusses how to measure the former empirically and next tries to correlate it with market structure. His conclusion is "that some degree of monopoly is essential to technological progress; and on the other hand that some freedom of entry and the spirit of competition are stimulating to progress." In fact, this conclusion is in good accordance with what a priori reasoning would lead us to believe. Starting at the far competitive end of the scale of market structures, we can see that under pure competition product innovation is ruled out by assumption, and since each seller can sell as much as he likes at the going price, there would be no incentive to such innovation, anyway. There would still be an incentive to process innovation, of course, but with profit margins low under freedom of entry there are not enough funds set aside for research. If there is to be research at all, it will have to be socialized research, like the Department of Agriculture research in this country. Taking our first step in the direction toward monopoly, we encounter the many-sellers, differentiated-products, easy-entry case. Here the individual seller can reduce his price or improve his product without fear of rival retaliation, for his encroachment upon rival preserves will distribute itself among so many rivals that it is negligible to each of them. This would seem to favor equally price reductions and product improvements, but again easiness of entry reduces profit margins and thus hampers research. Our second step takes us into that huge continent of the no-collusion, few-sellers, differentiated-products, difficult-entry case. Here, price reductions and product innovation are no longer equally inviting, for the former are known to be matched within the hour, whereas product innovation requires accumulation of know-how and also requires tooling-up—all of which puts a decisive premium on firstness. And profits are high enough to finance research.

On our way toward the monopoly end of the scale we have now passed the peak of conduciveness to product innovation. The next step is collusive oligopoly, and here a distinction must be made between the established agreement and prospective negotiations leading toward a new agreement. The former is not conducive to progressiveness, but the latter is, as I have tried to show elsewhere ("Cartels and Competition," *Weltwirtschaftliches Archiv,* 1951). In the American incandescent lamp industry, the effects upon progressiveness of an established agreement were seen very clearly in the failure of the A licensee to innovate. Should Westinghouse have developed an improved incandescent lamp, the licensor, General Electric, would have benefited three times as much as Westinghouse, for the latter must license G. E. under its patents royalty-free, and its sales quota was frozen at one-third of G. E.

sales. The effects upon progressiveness of prospective future negotiations were seen, just as clearly, in the successful attempt by Sylvania, an incandescent lamp B licensee with a 4.4 per cent sales quota, to liberate itself from its quota ties with G. E. by introducing its own fluorescent lamp and thus raising its market share from 5 to 20 in five years. The last step on our path—isolated monopoly—would have removed even this incentive to product innovation.

A priori reasoning could be supplemented by intereconomy comparisons. Surely collusion is more widespread in Great Britain than in the United States. Comparisons between industrial research expenditures in the two countries have been attempted in a report by the British Government's Advisory Council on Scientific Policy (*Cmd.* 8874, H. M. S. O., 1953). Our table summarizes the results according to which industrial laboratory research expenditure per money unit of gross national product is 0.006 here and 0.003 there.

Professor Maclaurin is "prepared to defend the thesis that technological progressiveness cannot be correlated directly with the monopolistic features

RESEARCH EXPENDITURE AND GROSS NATIONAL PRODUCT,
UNITED STATES AND GREAT BRITAIN
(In Billions)

| | U.S. | BRITAIN |
|---|---|---|
| Gross national product | $300 | £10 |
| Total research | 3 | 0.1 |
| Industrial laboratory research | 1.8 | 0.03 |

that I have singled out," and I am not prepared to dispute him. One other determinant of progressiveness may be the maturity of the product. At early stages of industry growth we are likely to have innovation, because this is what it takes to reach new markets. The American automobile industry before, say, 1925 is an illustration. But if the product is durable, at a later stage innovation may degenerate into style competition to encourage replacement of obsolescent units; viz., the same industry after 1925. But this brings me to a third determinant. Contrasting once again Europe with this country, we find that current European automobile models are very much less like their 1925 predecessors, design-wise, than current American models. The two French sales leaders have pioneered front-wheel-drive and engine-in-the-rear designs in the thirties and forties, respectively. The German sales leader, nonexistent before the war, has an air-cooled engine in the rear, and one British independent has worked seriously on a gas-turbine passenger car for several years by now. No doubt Detroit sees quite clearly the beneficial effects upon roadability to be achieved by getting rid of the long drive shaft and thus lowering the center of gravity. But with the ill-fated 1934 Chrysler Airflow in mind, Detroit thinks the average American consumer is much less prepared to accept the necessary changes in style than his European counterpart.

Technological progress has interesting macroeconomic aspects as well as microeconomic ones, and in his interesting paper Professor Siegel deals with some of these. First, he offers a terminology, and to clarify the latter, if I may, I would like to sketch one of those mathematical formulations that, in the words of Professor Siegel, are "much neater than lists of conditions." In a

familiar macroeconomic model denote: $C$ = real consumption; $g$ = equilibrium rate of growth of net real national output; $S$ = real capital stock; $Y$ = net real national output.

Let the parenthesis $(t)$ in flows refer to period $t$, in stocks to the *end* of period $t$. We can then write down the following four equations:

(1) $C(t) = \alpha Y(t)$, where $\alpha$ is a parameter

(2) $Y(t+1) = (1+g)Y(t)$

(3) $S(t-1) = bY(t)$, where $b$ is a parameter

(4) $Y(t) = C(t) + [S(t) - S(t-1)]$

Solve for $g$ and get:

$$g = \frac{1-\alpha}{b}$$

This is the conventional Harrodian equilibrium rate of growth ignoring technological change. Let us now include technological change and denote: $a$ = man-hour requirement per unit of net real national output; $\rho$ = rate of growth of labor productivity ($\rho$ is a parameter); $G$ = equilibrium rate of growth of employment; $N$ = employment in man-hours per unit of time.

Then:

(5) $N(t) = a(t)Y(t)$

(6) $\dfrac{1}{a(t+1)} = \dfrac{1}{a(t)}(1+\rho)$

(7) $N(t+1) = (1+G)N(t)$

Now solve for $G$ and get:

$$G = \frac{1 + \dfrac{1-\alpha}{b}}{1+\rho} - 1$$

Here is the equilibrium rate of growth of emplyment under rising labor productivity and constant capital coefficient. If the latter is equal to 4 and the average propensity to consume is 0.88, then in Professor Siegel's terminology a $\rho = 2$ per cent per annum "technological progress" will give us a $g = 3$ per cent per annum "economic growth," and it will raise employment by 1 per cent per annum. Our model differs from what Professor Siegel calls "the trivial case of the description of economic growth as a function of population and per capita productivity" in that population as a parameter has been replaced by the Harrod-Domar determination of employment growth. But an even more sophisticated version would drop $\rho$ as a parameter and admit that $\rho$ might well be a function of "industry and frugality" or "the spirit of enterprise." In such a sophisticated model, a reduction of $\alpha$ might raise $\rho$ and thus further reduce the value of $G$ relative to $g$. After all, Professor Siegel may well be right in his belief that, at the present state of the arts in our profession, a list of conditions is all we can accomplish.

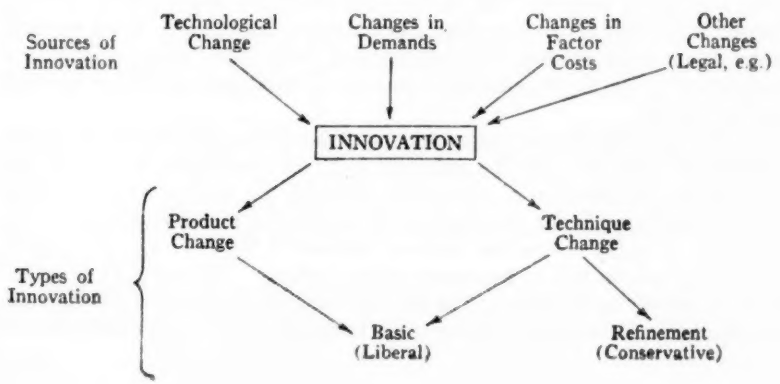
VINCENT F. BOLAND: Economists have been considering the effects of technological change for generations. These papers break ground into the equally important question of the sources of such change. Dr. Siegel has presented one possible classification of the sources of change, and Professor Maclaurin has

given us a specific study of some factors in industrial organization and competitive structure which seem to be relevant to the question.

1. The two papers are similar in that both are basically studies in American economic history. This fact may justify the repetition of an old criticism of economic history; namely, that its practitioners are overly inclined to accept the economic interpretation of historical development. It is true that the attempt to explain historical fact through economic motivation is no more misleading than the more common explanation through purely political considerations. It is also true that it is no less misleading. In discussing technological change we are discussing additions to human knowledge and the utilization of this new knowledge. Human qualities such as the originality needed to discover and the courage to innovate are of basic importance in this study. In attempting to understand such development it seems obvious that we must turn for help to the sociologists, anthropologists, psychologists, and others who have studied the basic human characteristics involved. If these specialists cannot help us immediately, we as economists may assist in the development of the tools we want by further clarification of our needs. In any case, an effort to develop tools and techniques relevant to our problem seems more promising than the continued use of such obviously false assumptions as that of the near universality of economic motivation, and more promising than the application of techniques which are not relevant to our problem, typified today by the application of mathematics and statistics to nonquantitative data or to data which must be forced into a quantitative form. The excellent results already achieved by the use of mathematical techniques in dealing with quantitative problems give some indication of what may be hoped for in applying sociology to sociological-economic problems. These results do not justify the use of mathematics in dealing with nonquantitative problems and they most certainly do not justify the neglect or abandonment of such problems.

2. In discussing technological change, certain confusions, largely semantic seem to arise rather frequently. Chart I below represents an effort to clarify the basic relationships involved.

CHART I
SOURCES AND TYPES OF INNOVATION



Technological change, following the usual usage, is new knowledge regarding products or techniques. It is obvious that this is only one of the sources of innovation. Innovation as such does not represent progress, whereas innovation attributable to technological change typically does. For example, Dr. Siegel's illustration of the introduction of laborsaving devices following restrictive labor union policies (changed factor costs) is not an example of progress but merely change and the adjustment to change. The total movement involved would probably be backward. Similarily, changes in demand and the adjustments to them do not represent economic progress, though such changes may stimulate progress. Professor Maclaurin's emphasis on investment potential as a measure of the significance of change would also seem to refer more properly to innovation.

The distinction between changes in techniques and changes in products is particularly important when attempts are made to provide quantitative measures of the significance of change. While all such efforts seem to me to be of doubtful validity, it is true that a fairly objective measure—that of comparative costs—is available in the case of technique changes. An approximation of demand elasticity over the relevant range of price changes, to give some notion of the highly nonobjective consumer's surplus involved, would still be needed. In the case of new products, especially those which satisfy needs which were previously not satisfied or nonexistent, no such measure is available. Judgments must be qualitative, and I believe it healthy to recognize this fact. The development of antibiotics may be of greater importance to man than the development of television though all objective measures such as investment, employment, and sales imply the opposite.

The distinction between basic change and refinement is possibly one of degree. In any case, I believe that it is frequently overemphasized. In economic affairs as in government our "liberal" innovations often become more valuable when managed by "conservatives" who take the innovations for granted and attempt to refine them rather than to introduce more new changes. The two types of change are complementary and cannot be ranked as superior or inferior. The sum total of conservative changes on an idea may have greater effect than the idea in its original form. Many goods become important only after extensive experience in their manufacture and use. The papers presented offer substantial evidence that business is particularly important in providing conservative change, which seems quite natural, as business firms normally accept their basic products and processes as given. The "value of ignorance" mentioned by Dr. Siegel refers to a condition of mind and knowledge favorable to basic change.

3. Professor Maclaurin's paper deals with industries, and he is therefore confronted immediately with the unhappy fact that economists have done very little in the classification of industries. Although the varying nature of industries is considered in the discussion, I do not believe that it is adequately emphasized. A highly specialized industry defined in terms of a single product, such as the automobile or house-assembling industry, will naturally be limited in its potentialities for change. The firm that introduces substantial change may thereby leave the industry. On the other hand, the firm in an industry defined

by a general type of process, such as the chemical industry, or the firm in an industry engaged in exploiting complex natural resources, such as petroleum processing, is presented with much greater potential for change merely because it deals with many more products and processes. The difference is not purely or primarily a matter of entrepreneurial vision. The conditions determining industrial definition are usually far beyond the control of individual firms, in market conditions, cost conditions, outside technological development, and so on. For example, the development of the refrigerator car, by widening market areas for the firm, may be said to have altered the nature of the meat-packing industry from a fairly simple set of operations to one of the most varied of modern industrial complexes.

I believe that the application of competitive models to industries rather than to firms will typically lead to confusion. The analysis of types and degrees of competition which has been so well developed in recent years is entirely an analysis of markets. While it may frequently happen that a firm operates in only one market or one type of market, this will be rare indeed for an industry, unless the market is monopsonistic. Many industries sell different products in quite different types of markets, and many find market conditions for a single product varying widely from place to place. This is true of project house construction, for example, which may vary from atomistic competition to nearly pure monopoly depending on the size of the market and local politics. As our analysis applies only to the relationship of the firm to its markets, it applies to industries only where there is monopoly or where all important firms are truly typical in their firm-market relationship.

4. One point in Professor Maclaurin's presentation from which I wish to dissent strongly is the use of investment opportunities created by change as a measure of the significance of change. Economic welfare is the purpose of economic activity. One change is more significant than another if it affects economic welfare more. National income is a remote enough measure of economic welfare, and I for one would not care to accept a still more remote measure, such as investment, which may not even be correlated with welfare. The necessity for using informed judgment rather than statistical techniques to measure human well-being is simply one of the facts of life in the social sciences. It is not an unpleasant fact. Capital-saving changes are growth just as truly as capital-using changes, as it is income-producing potential that measures the stature of an economy.

The place of investment in maintaining stability or full employment is of importance only if we assume conditions of stagnation and an inert government. The second assumption, at least, is unreasonable in an economy which accepts the philosophy of the Full Employment Act. Increased investment schedules have no greater effect on the level of income than increased schedules of consumption or government spending and are therefore "better" only if we assume that investment will tend to be more productive than anticipated or that positive interest rates represent an irrational preference in favor of present consumption.

5. The basic question of Professor Maclaurin's paper—the relative technological progressiveness of oligopoly as compared to atomistic competition—seems

to be of policy import in two types of cases. First, the relatively rare cases where a real choice exists as to the competitive organization of an industry. In this case a precise answer to the question might lead to desirable changes in antitrust laws in one direction or another. The second case is the far more common situation where research appears potentially worth while but the competitive structure is such as to discourage it. In this case I do not believe that the answer to Professor Maclaurin's question could do more than reinforce a conclusion which could be reached on a priori grounds; namely, that such research should in any case be subsidized by government or nonprofit institutions. I do not believe that any evidence has been presented to indicate that business sponsored research is more productive for equivalent expenditure than socially subsidized research. Subsidized research has the advantages of superior co-ordination and a lack of discrimination against promising research which does not promise immediate economic profit. The results of such research are more likely to be made freely available to all comers than those of privately conducted research, and a major source of monopoly power would thereby be eliminated. Changing industrial patterns from efficient and effective competition to a monopolistic situation is an unnecessary price to pay for the stimulation of research. Subsidized research is of course far more consistent with the idea of free enterprise than any possible motivation which could be provided to impel firms to conduct private research which would not normally be attractive to them. The economic function of government in a free enterprise economy is first to provide an atmosphere in which business will naturally tend to provide those goods and services most beneficial to the economy and secondly to supplement the activities of business in those fields where the profit motive does not operate effectively. It seems strange that many persons who would never confuse democracy with political anarchy should so easily confuse free enterprise with economic anarchy.

6. Dr. Siegel has provided us with a classification of the possible sources of change and with widely varied examples of the effects of specific sets of conditions. Some such classification in the mind of a thesis director could certainly lead to worth-while results, but its value would of course depend on its fruitfulness. It is my own feeling that a much more specific classification would be of greater value today. A classification based on the existing breakdown of academic specialties, for example, would allow a more rapid development of collaborations and dual specialists. Studies of the impact of law, politics, ethics, sociological relationships, and so on, on economic development would possibly move us into this field quite rapidly. The clearer vision thus provided would allow us to develop appropriate plans for further research. We can never know the best route into new territory in advance, but we should take that which seems to offer the easiest and most rapid immediate progress.

# GROWTH DECISIONS IN THE AMERICAN ECONOMY

## SOME INSTITUTIONAL FACTORS IN BUSINESS INVESTMENT DECISIONS

*By* Edgar M. Hoover
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Economists have devoted much productive effort, especially in the past quarter-century or so, to bringing price theory "up-to-date" by adopting more realistic assumptions than those of perfect competition or simple monopoly. Considerably less effective revision of the theories of distribution has been achieved. But in the area of the determination of investment, there has been little effective integration of the scattered theorizing and scanty inductive findings that might serve as a basis for a better and more realistic theory. It is fair to say that at present we do not know to what extent we may be led astray if we theorize about investment on the basis of assumptions of atomistic and perfectly competitive economic behavior, as is done sometimes explicitly and more often implicitly.

In the usual simplified model, investment is envisaged as producing a net expansion of the firm's stock of capital and thereby an expansion of its future stream of output and revenues. The amount of expansion of output achieved by additional net investment is determined by a known production function, and the revenues from sale of that output are determined by a known market demand schedule. The percentage rate of return on an investment is that rate of discounting of future receipts and payments which will equalize present value of total net investment outlay with present value of total net returns attributable to it over the whole productive life of the capital goods involved. This rate, once determined for a specific investment, can be compared with similar rates for various alternative investments and with the interest rate at which capital funds can be had. These comparisons determine the type and amount of investment the firm should make in order to maximize the present value of future returns. The maximization calculus calls for equating the marginal rates of return on various investments with one another and with the marginal cost of capital. In a highly simplified model the individual firm is commonly considered sufficiently small to make the supply of capital to it perfectly elastic; so that the marginal cost of capital is simply the going market rate of interest.

The various simplifying assumptions adopted in fitting investment into the structure of value and distribution theory did not pretend to reflect reality completely, even in an earlier day. It seems highly probable that subsequent institutional developments have made them still more out of line with reality. A somewhat different set of simplifications might be chosen if we were starting from scratch to create a theory.

## I

In this paper I do not aspire to outline a new basis for a simplified theory of investment behavior. I shall ignore altogether a number of important institutional factors—for example, financial intermediaries and the influence of collective bargaining—because they are covered in other recent papers. I propose only to examine some of the simplifying assumptions of the orthodox investment-determination model in the light of recent empirical findings about modern business structure and practices. Some of the points in question involve the supply side of the equation (i.e., the source of funds) and others the demand side (i.e., the appraisal of prospective gains from investment), and I shall take up both the supply side and the demand side a little later in this paper. However, there are some important institutional facts that involve both sides of the equation. I should like to look at these briefly first.

We may as well start off with the fundamental question of motivations. In criticisms of classical economic theory much has been made of the point that the motivations that govern business, whether or not we choose to classify them as "economic," involve far more than a simple, forthright urge to make as much money as possible. This criticism is justified and has begun to take constructive form in the inductive and deductive applications of psychology to economics.

I cannot add here to the accumulating body of knowledge and theory on that point. It may be in order, though, to insert a word of caution. It is now the vogue to try to make economics more realistic by going out and asking businessmen how and why they do things. The danger is that we may too easily and uncritically accept the businessman's answers as the best and most correct account of the workings of the economic system. This danger has been pointed out before by others.

With regard to nonpecuniary motivation, the modern businessman generally has a good deal to say, and there is no reason to question his sincerity. Motives of prestige, public spirit, fair dealing, and the like are certainly important. But the individual executive is not the firm, except in the smallest businesses; and economics is more proximately concerned with how firms act. The executive who toils not so much for added wealth as for prestige and power may rightly consider his motivation nonpecuniary; but how, after all, does he keep score? His at-

tainment of prestige and power may well be measured primarily in terms of the financial success and expansion of the firm. To satisfy nonpecuniary urges of his own, he must serve the pecuniary interests of the firm. He himself may be "in business for his health"; but he never assumes that the firm shares that amiable human weakness. It seems safe to say, then, that the firm comes considerably closer to the classical norm of the economic man than the man himself does. This should be of some small comfort to those who feel that the purposes of economic theory can be best served if the underlying assumptions on motivation do not have to be made too broad and complex.

The distinction between the individual and the firm has another important aspect on which much has been written; namely, the fact that a firm's actions represent a resultant of somewhat divergent interests operating within it. Ownership, control, responsibility, and entrepreneurship do not reside in the same parties. Who runs the firm, and for whose benefit?

The role of the ordinary stockholder has always been a little ambiguous and hard to fit into the traditional functions of owner, lender, or entrepreneur. If the firm's policies could be assumed always to reflect an effort to maximize dividends, there would be no important theoretical difficulty. The stockholders would collectively represent the entrepreneur-owner of economic theory and management would simply serve as their hired agent. But in practice if not in law, the situation is usually otherwise. A management group, which may not own an important fraction of the stock and in whose income dividends may not be very important, controls the firm, subject to restraints that may be imposed from time to time by large stockholders. Thus the maximizing of dividend income for stockholders as a group is not an objective that is necessarily unique or paramount. Instead, management officials will seek to improve the long-run earnings and competitive position of the firm and their own prestige as managers. At the same time they will have an eye to retaining the confidence of the principal stockholders and sometimes perhaps to outside but related interests of their own. They may in many situations come to regard some level of dividends as a sort of fairly fixed cost, akin to interest and representing a drain on earnings and assets that has to be paid in order to preserve their own tenure and to facilitate the floating of additional equities. The picture is further complicated by considerations of possible "dilution" of equity or jeopardizing of control in connection with the issuance of new stock.

Next we come to a point that may seem a mere matter of accounting detail but which actually has broader implications: the use of gross as distinct from net concepts of financing and investment outlay.

In traditional simplified theory, both investment outlays and the

supply of investment funds are net concepts. The firm is pictured as enlarging its stock of capital to provide for increased output. The replacement of retired capital equipment is implicitly regarded as automatically financed from depreciation allowances, so that replacement outlays do not enter into investment and depreciation accruals do not enter into earnings. This is a convenient simplification. In theory it makes it possible to develop "production-function" relations between the stock of capital and productive capacity and also to define net profits as returns remaining after provision has been made for maintaining the firm's stock of capital.

Full reliance on the "net" approach is appropriate, however, only under highly unrealistic circumstances, in which there is no change in either the quality or price of capital goods and therefore depreciation allowances and replacement outlays can be scheduled to maintain a capital stock unchanged in size, value, and quality. In a world of changing techniques and prices, depreciation changes fill only the much less useful function of eventually accounting for, and semiarbitrarily distributing over time, the initial money outlays.

In recognition of these realities, we find a tendency among businessmen to think of investment and its financing in gross terms. This tendency, for obvious reasons, was reinforced by the large rises in price levels of the past ten or twelve years and is especially evident in industries undergoing rapid technological development. There has been increased interest in replacement-cost accounting and similar devices—which, however, do not fully meet the situation. Current practice is mixed. The distinction between "expansion" and "replacement" outlays, though blurred in practice as in theory, continues to be used. In the McGraw-Hill surveys of investment plans and outlays, for example, it has been found feasible to get respondents to make this separation. It is not claimed, however, that the line can be precisely drawn; quite generally the replacement and modernization outlays produce some capacity expansion too. In any event, the concept of maintaining capacity is not the same as that of maintaining a constant stock of capital in either physical or value terms. Most other regular investment surveys (for example, those of the U. S. Department of Commerce and the Canadian Department of Trade and Commerce) ask simply for gross investment in plant and equipment with no attempt to arrive at net investment or capital consumption through the survey approach.

With respect to the financing of investment, on the other hand, it is of course possible, and indeed customary, to separate out that part of the gross internal funds that represents depreciation in the accounting sense. Moreover, the distinction has a definite and important significance in relation to tax liabilities and in relation to the picture the out-

side world gets of the firm's efficiency and viability. Consequently it would be going too far to say that internal funds are simply considered gross; i.e., that depreciation accruals are thrown into the common pot of funds available for investment and not in any degree earmarked or distinguished from other internal funds. It appears from responses to field surveys that management commonly feels a greater freedom, and a greater responsibility, for investment outlays up to the level financed by depreciation accruals than it does for additional investment beyond that level. Firms frequently report that they regard depreciation funds as quasi-automatically earmarked for investment and as constituting a sort of basic minimum. We shall return to this point.

## II

We turn now to a consideration of the supply side (that is, the financing aspects) of investment by the firm. In the highly simplified model of investment decisions, the supply side of the marginal calculus determining the firm's investment is represented by the interest rate. The firm draws on a homogeneous and effectively unlimited reservoir of funds at that rate, without regard to whether those funds originate internally or externally; and expands its net investment until the expected marginal returns therefrom no longer exceed the interest rate. This is shown graphically in Figure 1*a*.

Investment, under this scheme, was reckoned on a net basis, beginning only after all depreciation allowances had been allocated to capital replacement. However, the same horizontal supply curve for funds could in a sense be projected back into the range of negative net investment, to take account of the possibility that an unprofitable firm might minimize its losses by letting its capital deteriorate while investing outside at the going rate such of its gross earnings as were chargeable to depreciation.

In the light of what we know about present-day investment practices, a re-examination of this theoretical scheme seems in order. Several reasonably well-documented generalizations about investment behavior need to be taken into account.

First, there is the finding, also mentioned earlier, that those actually in control of a firm's policies tend to regard dividends more as a somewhat fixed cost than as a residual to be maximized.

Secondly, there is the generally reported tendency to prefer the use of internal funds so far as possible. The existence of a preference for internal funds, in the nonregulated sector of industry at least, seems amply documented by various surveys of financial practice. (For special reasons, public utilities rely to a much greater extent on outside financing.)

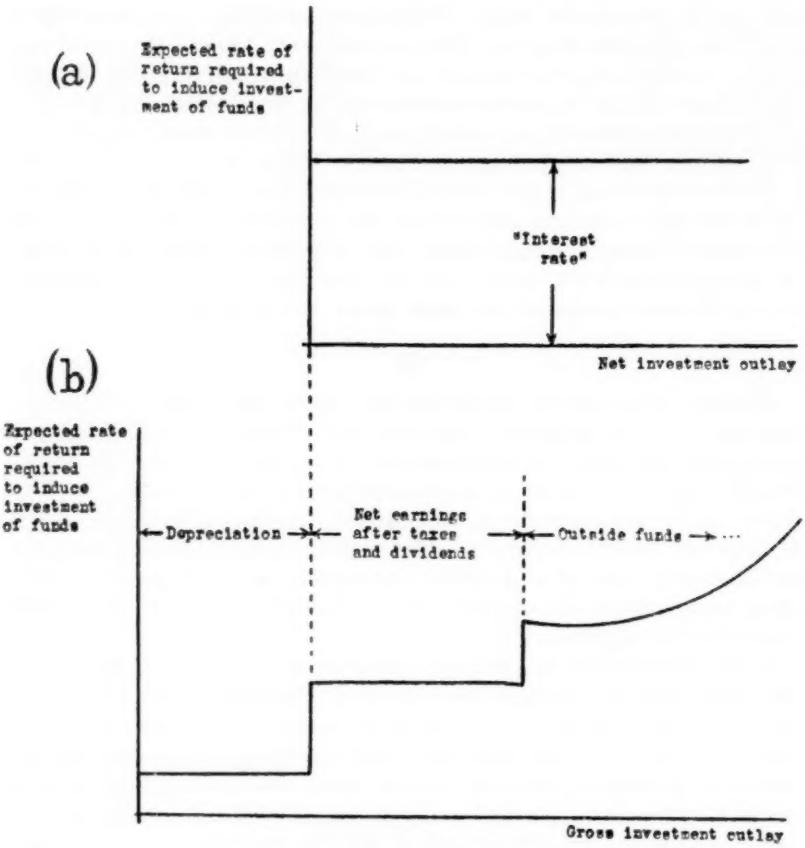


FIGURE 1
SCHEMATIC SUPPLY CURVES FOR AVAILABILITY AND USE OF INVESTMENT FUNDS (INTERNAL AND EXTERNAL) FOR AN INDIVIDUAL FIRM

Part of this preference is really a preference for equity financing as against debt financing, which can easily be rationalized and incorporated into theory in terms of a risk allowance for the dangers of increased leverage in the firm's financial structure. A part of the preference for retained earnings as against outside equity funds involves the rather subtle question of dilution of equity, or in some cases the jeopardizing of control, and is to that extent involved with the question of divergent interests within the firm, already mentioned. But if we are to believe the businessmen themselves, there is probably a still further element of preference for internal financing that cannot be rationalized in any of the foregoing ways but only in terms of factors difficult to

identify and measure. Some of the preference thus remains, for the theorist, in the category of noneconomic or even nonrational behavior.

Finally, we come to the most striking observation emerging from various surveys of investment behavior. Outside of the field of public utilities, and some types of construction in other fields, businessmen almost uniformly declare that the interest rate is unimportant in determining their investment plans. This finding has been widely publicized and has been made the basis for at least tentative conclusions on public policies for economic stabilization. I suggest that it is still to be viewed with some caution.

In some of the surveys (though not all), it is clear that the respondents were led to interpret the question too literally in terms of the rate at which outside money could be borrowed. But the concept "interest rate" as used in the shorthand of the economic theorist is not simply that. It is really a complex of considerations that can be summed up as "cost and availability of external and internal funds." A number of investigators have been led to point to the firm's cash position as the most important determinant of investment on the supply side. Cash resources depend basically on the level of net earnings but also in part upon depreciation accruals, cash accumulations from past earnings, and earmarkings of cash for dividends, working capital, and contingencies.

Another relevant point involves the aggregation problem. Even though variations in the cost or availability of funds may have relatively insignificant effects on investment by the typical firm in comparison with such factors as variations in the expected level of sales, the cost or availability of funds may still be an important factor for an aggregate of firms because it is likely to fluctuate in the same direction at the same time for most firms. The aggregate effect on business investment may be significant even if only a few firms at the margin are affected, because it is likely that a large proportion of these will be affected simultaneously in the same direction. In the case of changes in sales outlook, on the other hand, there is much more diversity among the changes as seen by individual firms (and thus among their investment reactions), and consequently a large proportion of the investment responses cancels out for business in the aggregate. What has been said about changes in sales outlook applies as well to several other factors frequently mentioned by individual firms as important in shaping their investment plans.

It remains true, however, that the old theoretical formulation fits badly. Investment determination by comparison of expected marginal rates of return against some interest rate, however broadly defined, appears to be the exception rather than the rule in business practice. It appears premature to conclude that theories of investment which as-

sign a significant role to the cost of capital are not applicable to an industry or to the whole economy; but clearly some revision is required in the traditional picture of investment behavior of the individual firm.

In the light of what we now know about actual investment practices, how might we go about redrawing the supply schedule of investment funds as seen by the individual firm in order to get a more realistic and useful picture than that furnished by the horizontal supply curve implied in the simplified interest rate explanation of the supply side?

First of all, investment funds are appropriately considered in gross terms. The first segment of the supply curve describes the availability of the firm's own depreciation allowances for reinvestment. I have drawn this segment of the curve as running along horizontally at quite a low level, and then turning vertically upward at the point corresponding to full use of depreciation funds. This shape of the curve reflects an impression, meagerly documented to be sure, that managements are generally inclined in good times to take for granted the desirability of currently investing at least as much of gross earnings as corresponds to depreciation accruals, while in times of stringency they may view these depreciation accruals as setting a convenient administrative ceiling on investment.

The next segment of the supply curve, moving to the right, concerns the availability for reinvestment of that part of the firm's net earnings remaining after taxes and dividends. Indications are that this segment also may be conceived as a practically horizontal line, but on a substantially higher plateau than the earlier part of the curve. In other words, the management is prepared to invest the whole of net earnings after taxes and dividends, but not unquestioningly or automatically. Such investment must justify itself by a prospect of net returns. This segment also turns vertically upward at the right.

Survey respondents frequently report that they do not try to dole out internal funds of this category to investment on the basis of comparisons of expected marginal rates of return, but that instead they limit the total rate of investment to their cash resources, and then establish a sufficiently rigorous standard of early payoff for individual projects so that the total approved will not exceed cash availability. This implies that the firm normally considers that it has more than enough worth-while investment opportunities to justify reinvestment of all its net earnings after usual dividends. In graphic terms, the implication is that the downward sloping returns curve does not intersect the supply curve until the latter has reached the end of the horizontal stretch I have described and has turned up abruptly and steeply (at the point where all net earnings after dividend requirements have been earmarked for investment).

Moving still farther to the right, we find the third and last segment of the supply curve, representing recourse to external funds. This segment starts at a considerably higher level, indicating the characteristic market imperfection implied by the phrase "preference for use of internal funds." Moreover, this external-funds segment, eventually if not immediately, turns upward. External funds become more costly for a given firm at a given time as larger amounts are to be raised.

The above schematic picture of the supply curve (Figure 1*b*) is more sophisticated than the original simplified picture in Figure 1*a*; but remains highly generalized. It omits in particular certain questions of importance: the possible elasticity of dividend payments and cash reserves in the face of investment opportunities, and the choice between various types of external financing, notably as between equity and debt financing and among the various types of short-term and long-term funds that may be available. These choices vary so much according to the particular situation that it seems fruitless to try to generalize further here.

If the supply curve of funds for a firm does correspond to the pattern I have sketched, with its two marked discontinuities, it follows that at any given time we should expect to find a considerable proportion of firms operating at one or the other of the two discontinuity points and consequently not being concerned with any close comparison of marginal costs and marginal returns. In graphical terms, the returns or demand curve will often be found intersecting the supply curve in one of the latter's two vertical phases. Many firms will be in a position of justifying their investments because they are all financed out of depreciation, while another large proportion of firms will be justifying their investments because they are all financed out of internal funds and not interfering with dividends. For both categories, it would take a rather large shift in the schedule of prospective investment returns (i.e., in the returns curve) to induce them to change their investment plans.

Just how much difference this makes when we pass from the individual firm to the industry or the economy as a whole is open to question. There are always likely to be some firms affected by a general shift in investment prospects or a rise or fall in the open market costs or availability of funds. At the least, however, it would appear necessary in analyzing aggregate effects to separate out those influences on investment that work through changes in business profits and availability of internal funds from those that work through changes in the interest rate, or more broadly and correctly the cost and availability of outside capital of various types. The degree of further sophistication and breakdown that may be appropriate depends on the level of analysis involved.

It may be worth noting that, so far as the cost of equity funds is concerned, quite similar factors may govern the supply of both internal and external equity funds, making the distinction to that extent less essential. To the extent that buyers of new shares look at the current and recent earnings record of the firm as their basis for judging prospective dividends and capital gains to stockholders, the supply condition of external equity funds has something in common with those of internal funds.

## III

We now come to the last group of considerations: the ways in which firms appraise the prospective gains from investment in determining their programs.

The firm's estimate of prospective returns on various investments under consideration has always obviously been much more complicated in actual cases than in the simplified model. In some respects, at least, this estimate has became a more complex problem in the large corporation of today than it was in the days when economists first formulated the simplified marginal theory of investment.

The breadth and complexity of the problem of estimating investment benefits in the modern large firm are reflected in the findings of several surveys that have sought to add to our knowledge of how investment decisions are made. The investigators uniformly report a tendency for respondents to fall back on such terms as "general policy" or "strategy" in explaining the criteria they use. Such terms mean merely that the rating of projects is not adequately expressed simply in an estimated prospective rate of return, but that important unquantified considerations are given weight by judgment, at the top-management level. This does not necessarily mean that genuinely nonprofit motivations are important; it may mean simply that some of the ultimate profits expected from an investment are so remote, indirect, or hard to estimate that it is not worth trying to set a figure on them. The basic assumption of profit maximization as the primary motive is not challenged by these findings but simply made more difficult to substantiate.

One relevant fact is that desirability of any specific investment outlay depends to a large extent on other specific outlays which form part of a long-term integrated investment program. This is especially true in the large firm. Under these circumstances it may be meaningless to try to isolate and measure the returns attributable to a particular purchase or set of purchases. Often the only test that can be applied is to ask whether the purchases in question are or are not essential to the fulfillment of a larger program, the over-all returns on which are appraised as a unit.

Moreover, any realistic estimate of the prospective returns from

investment must generally allow for shifts in both production functions and demand function resulting from changing technology and income and consumption patterns.

But the main reason that makes investment programs hard to rationalize on any simple slide-rule basis is that the firm now characteristically has both a broader and a longer outlook on investment opportunities and prospects.

In referring to a broader outlook, I mean essentially that business firms have developed a greatly increased awareness of the repercussions of their policies upon outside interests and an increased feeling of responsibility therefor. Simplified analytical models, even those which take account of oligopoly or oligopsony power, fall far short of doing justice to these considerations. The consciousness of repercussions extends far beyond anticipations of the reactions of direct competitors and is only in part associated with the bigness or "monopoly power" of a firm.

The point I am making, however, does have especially great relevance to the larger firm. The large firm of today does not make major investment decisions without considering the economic and political impact on communities, the reactions of labor groups to major changes in the level or pattern of employment, effects on the attitudes of government agencies with which the firm may have relations (e.g., the Departments of Justice and Defense), and effects on the attitudes of customers and on public relations generally.

The current interest in concepts of countervailing power, which have come in for attention at several earlier sessions here, reflects awareness of the broader and more complex array of pressures to which the modern firm is responsive. But we lack at present any adequate framework for applying these strategic considerations to a simplified theory of investment policies or economic growth.

Perhaps some limited methodological guidance is to be had from the kind of allowance for anticipated reactions that is incorporated in the present theory of oligopoly. In determining its production and selling policy, the firm with some oligopoly power develops familiar rules of restraint upon cutthroat competition. It refrains from all-out, short-run efforts to capture a maximum share of the market, because it is conscious of the risks of retaliation by its competitors. In extreme cases this restraint takes the form of market sharing and generalized restriction of output.

But there are two major difficulties in extending this approach to the longer range considerations involved in the investment policy of firms, even if the scope of reactions considered is restricted to embrace only the reactions of the firm's competitors.

The first complication is that a firm's current degree of monopoly power (or bargaining strength in its selling and purchasing) often cannot simply be projected into the future when investment programs are considered. An important aspect of an investment program may be the very fact that it promises to improve the firm's degree of monopoly and to shield the firm in future from the more distasteful impacts of present competition. An investment strategy in which the degree of monopoly is itself one of the objects of change evidently calls for an analysis at least one step more sophisticated than that applicable to price and output determination in current markets.

A second complication is the fact that the kind of long-range competitive strategy which is relevant to investment planning is certainly very different from short-run competitive tactics. Even the firm that highly cherishes market stability and follows a live-and-let-live policy in regard to prices and market sharing does not thereby forswear ulterior and ambitious designs for the future. It cannot rely on simply keeping its present share of the market forever; its long-range outlook is relatively fluid. Moreover, the reaction of competitors to a long-range investment program is far less automatic, less immediate and less fraught with throat-cutting perils than are the reactions of those competitors to a price cut or an abrupt market invasion. A firm may even hope to forestall the expansion and entry of competitors if it can take the lead in expansion and improvement and perhaps pre-empt scarce natural resources or patent rights. All this may be summed up by saying that the long-run behavior of firms is more aggressively competitive —less subject to oligopolistic restraints on expansion—than the short-run behavior of firms.

What then can be said about factors limiting and governing the firm's long-range investment ambitions?

First, there is for the very large firm a long-run restraint in the form of a reluctance to court the onus of monopoly. The acknowledged giant of an industry, overshadowing all competitors, is very likely to face public suspicion and the more tangible annoyances and risks of antitrust prosecution or inquiry. It is under the continual burden of convincing the public and the government that its size and power are not a menace to the competitive system. Dislike for this status has almost certainly tempered the expansionist drive of some of our largest corporations.

Under these conditions the very large firm naturally seeks release in breadth. It expands sidewise into allied lines of production.

Diversification and qualitative flexibility of production have another important advantage, not confined to large firms. Such a policy may promise a hedge against technological trends which threaten ultimate stagnation to the firm whose fortunes are too tightly bound up with a

single industry. So it seeks to divert some of its growth into newer and more dynamic industries, and thus to insure continued profitability and progress.

Recognition of the technological advantages and "growth insurance" that can be attained by judicious diversification has undoubtedly increased. It has reinforced, and has been reinforced by, the marked trend toward reliance on internal research and development. To a very considerable extent, the modern corporation can engender and control by its research program the progress of invention as well as innovation. It can likewise engender and control, through its sales promotion efforts, the development of new product demands. Thus new products and techniques and new demands now originate to a large extent within the firm. And a large part of business investment is devoted to precisely this, if investment is defined broadly enough to include outlays on research and development and outlays devoted to building up new demands.

As I have said earlier, the modern firm's investment policies are based on not only a broader but also a longer view. Substantial hope has even been voiced in recent years, by De Chazeau and others, that this longer view may mean that business policies can play an active and important part in moderating the business cycle.

This longer view arises in part from the very size of the firms which account for a major share of output, particularly in the durable goods industries. In part, too, it arises from the more prominent role that internal research and development activities now play in business firms, which makes it more feasible for them to exert some influence on the timing of invention as well as innovation. In part, it arises from the growth of the complex modern firm with its separation of ownership from control, which puts more control into the hands of those whose interests are in stability and long-range growth rather than immediate dividends. But perhaps most important of all, among the factors basic to a longer view, is the increasing awareness of public and governmental reactions and a feeling that programs conducive to greater over-all stability are not only "public spirited" but also, in the long run, good business.

# TRADE-UNIONISM, COLLECTIVE BARGAINING, AND ECONOMIC GROWTH

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It is doubtless trite to comment that with the passage of time an increasingly growing number of the more important economic decisions in this country have been the result of group rather than individual action. In fact, it might not be at all inappropriate to characterize our system as a "group economy"; that seems a more relevant appelation than a "laboristic economy" if we are intent on focusing on the locus of decision-making power in both factor and product markets.

This "groupism" has been diagnosed by more than one thoughtful student of the problem as a stepping stone to all-out collectivism of one form or another. That may or may not be accurate diagnosis-prognosis. But one thing is certain: no such analysis can reach any meaningful conclusion unless it takes account of the future pattern of economic growth. For if this pattern is constructive enough, the group economy need not necessariiy become, say, a socialist one. Even Schumpeter, otherwise a "scientific believer" in the "inevitability" of socialism, seemed to imply as much.[1] Moreover, many of the shortcomings of our economic engine will be disregarded for all practical purposes if the pattern of economic growth is adequately constructive.

Hence, for anyone concerned with the drift of the economy, one of the crucial questions becomes this: will the group organizations now rampant in the factor and product markets significantly affect the pattern of future growth? This paper will be concerned solely with groupism in the labor market and will deal with the relationship between collective bargaining and the pattern of growth.

## I

By the pattern of economic growth in any nation we mean specifically: (1) the average rate of change of total output over a relatively long period of time; (2) the form of this change—whether it is smooth, jerky, etc. (from an analytic viewpoint, it would be ideal if this form lent itself to characterization by some mathematical function); (3) the changing components of total output through time, including such rele-

[1] J. A. Schumpeter, "The March into Socialism," *American Economic Review*, May, 1950, pp. 450, 455.

vant nonmarket values as leisure. Needless to add, these three aspects are interrelated in practice.

We shall assume that the pattern of growth is conditioned by the following factors: the quality and quantity of natural resources; the quality and quantity of labor resources; the quality and quantity of leadership in the relevant sectors of society (business, scientific, governmental, etc.); the pattern of incentives; the economic and political institutional arrangements; and the dominant cultural values. Note that this is merely a very rudimentary listing of the determinants of growth —a check list, if you will—designed to facilitate exposition in the ensuing analysis. Note, also, that while the various factors above are conceptually distinct, they are often interrelated in practice. And note, finally, that the preceding factors are very broad categories which can be broken down into numerous subcategories.

*Pattern of Incentives: Labor.* We shall examine, first, those trade-union policies which may conceivably influence those worker incentives that, directly or indirectly, have a bearing on the pattern of economic growth.

*Ceteris paribus,* the union standard rate practice probably cuts down productivity among workers compensated on a time-rated basis. Incentive-rated workers, on the other hand, are hardly affected by this policy; and it has been estimated that about one-half of the industrial workers in this country are compensated on an incentive basis.

Seniority policy in promotions, to the extent that it prevails, probably reduces productivity in a twofold sense: it cuts down the incentive to produce for those time-rated workers with inadequate seniority status for promotional purposes; it allocates labor in the plant (or firm) on a basis other than efficiency alone. There are, however, these reservations to be kept in mind: many labor contracts allow seniority status to be determining only when ability, merit, etc., are equal. Now where such provisions obtain, the negative impact on worker productivity is negligible; in fact, the impact may even be positive through the beneficial influence on morale.

Seniority policy—in promotions, layoffs, and other aspects of labor assignment—probably cuts down horizontal labor mobility below the "optimum."[2] But the important point is this: the comparison has to be made, not with an ideal never hitherto attained (or ever attainable in a free society), but with the real situation in the absence of unionism. And since the realistic situation is very far from the theoretical norm,[3] the pattern under unionism is, in all likelihood, not radically different from what would have otherwise been the case.

[2] J. Shister, "Labor Mobility: Some Institutional Aspects," *Proceedings of the Industrial Relations Research Association,* 1950.

[3] Cf. L. G. Reynolds, *The Structure of Labor Markets* (New York, 1951).

The absolute, general (across-the-board) wage increases practiced by the so-called "industrial" unions do, of course, cut down differentials between occupations. Carried far enough, such compression of occupational rates would significantly reduce the incentive for unskilled and semiskilled workers to move up the occupational ladder; and that, in turn, would reduce productivity—even disastrously. But there is only one thing wrong with this logical projection: reality belies it. While it is true that industrial unions have pressed for absolute wage increases in the bargaining unit, this policy has been very far from universal either in time or space.[4] As a result, while occupational differentials have been narrowed somewhat by union policy, they have not been compressed to anywhere near the danger point by this influence. The narrowing of occupational wage differentials in the United States, which incidentally is a phenomenon that considerably predates the spread of industrial unionism, has been attributable mainly to market forces[5] and government action.[6]

By the very logic of survival and growth, the industrial unions cannot go too far in compressing the differentials even though they are politically dominated by the unskilled and semiskilled. For if the skilled groups become dissatisfied, they will secede—a process greatly facilitated by the provisions on the appropriate bargaining unit in the Taft-Hartley Act—and the industrial union will lose a considerable portion of its bargaining power. Small wonder, therefore, that in the recent modification of the General Motors-U.A.W. contract, substantially greater wage increases were negotiated for the skilled occupations than for the others.[7] And further illustrations could be adduced.[8]

The spread of market bargaining[9] and the tendency to wage uniformity in such contracts has probably reduced horizontal labor mobility somewhat, but not to any significant degree, for these reasons: First, even under market bargaining, wage differentials between firms—oftentimes significant ones—still prevail. Secondly, the determinants of labor mobility are such that wage differentials, even where they exist, are often overshadowed by a variety of other factors in the constellation of variables that induce mobility.

[4] Cf. H. M. Douty, "Union Impact on Wage Structures," *Proceedings of the Industrial Relations Research Association,* 1953.

[5] *Employment and Wages in the United States* (Twentieth Century Fund, 1953), pp. 470-472. For a different analysis, however, consult R. A. Lester, "A Range Theory of Wage Differentials," *Industrial and Labor Relations Review,* July, 1952, pp. 494-497.

[6] D. R. Roberts, "The Meaning of Recent Wage Changes," in *Insights into Labor Issues* (New York, 1948).

[7] *Monthly Labor Review,* August, 1953, p. 845.

[8] *Monthly Labor Review,* November, 1953, pp. 1201-1202; H. M. Douty, "Union Impact on Wage Structures," *Proceedings of Industrial Relations Research Association,* 1953.

[9] For the meaning of this concept, consult J. Shister, "Trade-Union Policies and Nonmarket Values," *American Economic Review,* May, 1950

Output control by unions—output restriction, if you will—obviously affects the short-run productivity of the worker. But the crucial point is this: such control prevails even in the absence of unionism, although perhaps in somewhat lesser degree. And note, too, that certain types of output control, while reducing short-run productivity, may well increase it over the long pull. (Cf. J. Shister, *op. cit.*)

Our knowledge of the relationship between morale and productivity is woefully inadequate. But it would not seem unreasonable to aver that, in general, an improvement in morale will certainly not reduce productivity and will probably increase it somewhat. Now, if one stands ready to assume that unionism and collective bargaining improve worker morale—a proposition which again, while not unreasonable, has not been proven by any stretch of the imagination—it follows that whatever the direct impact on worker productivity of various specific collective bargaining practices, this impact is only a gross result; the net result must also take account of the morale facet.

In the present state of union organization, where less than one-half of nonsupervisory and nontechnical employees belong to unions, it is clear that union restrictions on membership admission cannot control the total supply of labor. Such restrictions, where they exist, can, of course, significantly affect the distribution of the labor supply and thereby affect economic growth under given conditions. But note that such membership restriction is characteristic of only a small portion of American unions[10] and the Taft-Hartley Act and legislation in various states have markedly reduced the effectiveness of such membership restriction on the distribution of the labor supply.

*Pattern of Incentives: Management.* Trade-union policy directly influences managerial decisions through two channels: the cost impact and the irritation impact. The latter can be defined as an impact which, while not significantly affecting costs in either the short or long run, antagonizes management because of various nonpecuniary considerations. This is not to imply, of course, that all union practices which partake of the first characteristic fail to antagonize management. The crucial question for our purposes is this: Does collective bargaining modify business leadership incentive to execute policies which significantly affect the pattern of economic growth?

To deal with the irritation impact first. That business leaders in America have been seriously annoyed by many union practices is too obvious to need either illustration or proof. And the annoyance manifests itself in the important as well as the (seemingly) unimportant areas of the collective bargaining process. But while such irritation has

[10] C. W. Summers, "Admission Policies of Labor Unions," *Quarterly Journal of Economics*, November, 1946.

probably increased the practice of American psychiatrists, its effect on economic growth has been negligible. To be sure, one hears of the odd case here and there (I know of only one in my experience) where the management decided to liquidate the business rather than continue with the "headaches" of collective bargaining. But even in these exceptional cases, the effect on total output (notably in the long run) may be nil, for the demand may well shift to firms where the mental and physical make-up of the leadership is of a hardier sort.

To turn now to the cost impact of collective bargaining. Do unions raise wages significantly higher than would have been the case in the absence of organization? And if so, does this significantly reduce the propensity to invest and, therefore, economic growth? Let me state at the outset that the first question cannot now—and presumably never will—be answered with anything even approaching scientifically irrefutable precision, given the nature of the problem. But the studies now available (by Levinson, Rees, Ross, and others) offer us what I might term "suggestive practical evidence"—which is the most we can hope for in this field. And these studies imply the following conclusions: over the long pull, union wages rise more than would have otherwise been the case; the differential gains of unions are made during periods of "less than full employment" and during the early stages of organization; during periods of full employment, unions show no differential gain and may even exhibit a relative loss.

Granted the preceding conclusions, the impact of collective bargaining on the propensity to invest must be analyzed in terms of these propositions: During what phases of the relevant cycle are the preponderance of investment commitments made? Do union labor costs differ from what would have been the case in the absence of unionism during such periods? If so, how does this difference affect commitments?

While economic growth is obviously a long-run phenomenon, the fact remains that investment commitments made at any point of time are conditioned—in varying degrees—by the cyclical economic climate then prevailing. Where, of course, this cyclical influence is negligible, which could very well be the case with very long-run investments, then it is clear that collective bargaining has relatively little impact on the investment decision, for the uncertainties associated with such long-range investment plans completely dwarf any feasible differences between union and nonunion labor costs.

Our knowledge of investment commitments is very meager indeed—to put it mildly. But even on the basis of what we know, it is probably not too inaccurate to aver that most of the commitments are made in the upswing of the relevant cycle. Now, during the high employment stages of the upswing, union wages do not rise any more than in the absence of unionism, and perhaps even less. (This does not imply, of

course, that the timing and the form of the wage changes are exactly the same under unionism as they would be in the absence of organization.) Hence, whatever the impact of wages on investment, the union does not significantly alter the situation insofar as managerial expectations are conditioned by the magnitude of wage movements during the period in question. True, the crucial variable in this analysis should be unit labor costs and not wage rates. Now, even in the absence of unionism we should expect unit costs to rise in the later phases of the upswing of the cycle because of overtime, the use of less efficient labor, etc. And there seems to be no basis for assuming that unionism accelerates this cost rise. Restrictive and costly union practices are in large part a response to an unfavorable economic climate; and so unions customarily impose them not when jobs are plentiful but when they are relatively scarce—which means during the downswing or the early stages of recovery.

When we move away from the high employment stages of the upswing and turn to other phases of the relevant cycle—notably the downswing and early recovery—collective bargaining unquestionably increases costs relative to the situation in the absence of organization. But what is the differential impact on investment commitments? Since we do not know with any degree of certainty what influences investment decisions, we simply cannot answer this question in any constructive way. And until such time as our knowledge in this area is adequate, it is a little too cavalier to jump to the conclusion that the relatively higher union labor costs stifle investment commitments.[11] Actually, one can set up all kinds of logically consistent theoretical models (merely by altering the assumptions) in which the union influence would vary from one extreme of complete "discouragement" to the other of complete "encouragement." But even if one accepts the argument that union labor costs discourage investment during the downswing and early recovery of the relevant cycle, can it not logically be argued that, *ceteris paribus,* a goodly portion of these investment plans will merely be deferred to other stages of the cycle and the over-all rate of growth (not the form) will be only negligibly affected? And the form of growth itself may be unaffected if one is dealing with a very intense depression where relatively few investment commitments would be made even in the absence of collective bargaining.

How does collective bargaining influence the pace of technological

[11] Note carefully that in the above analysis we assume that any given industry is totally unionized, and are raising this question: what would have obtained in the given setting if unionism had been completely absent? That is obviously quite different from focusing on the issue of whether the organized sector of a given industry is affected by the labor costs prevailing in the unorganized sector. In the latter case, it has been amply demonstrated that, under given circumstances, the unorganized sector can grow at the expense of the organized. The textile industry is a case in point. But that problem does not concern us here because neither total output nor the components of output are thereby affected in most instances.

change which, in turn, influences the pattern of growth? First to clear away a common misconception. By and large, unions in this country no longer pursue the policy of opposing outright all technical change in the industry which threatens employment security, as they did years ago. Rather, the currently prevailing policy is for most (though not all) unions to accept technical change, but to work out mutually satisfactory arrangements with management providing employment for some or all of the potentially displaced workers. And in some cases—the number is growing—there is outright encouragement of technical change because of collective agreements that enable the workers to share in the productivity gains via wage increases. The productivity clauses in the so-called "General Motors type" of agreement, the Scanlon plans, and various other types of union-management co-operation schemes are cases in point. Such encouragement is far more characteristic of the (so-called) industrial unions than the (so-called) craft organizations, but it is not unknown even among the latter.

Union wage policy may also accelerate the pace of technical change by providing incentives for business leadership to intensify its search for laborsaving devices. But that is only a hypothesis, and the only available study on the topic[12] seems to cast doubt on this proposition as a universal rule, although there are supporting cases even in this study.[13]

Similarly, the so-called "shock impact" of union wage policy is something on which the available evidence is far too skimpy. But it is certainly reasonable to assume that some shock impact stems from union pressures, even though the impact may be small. And to the extent that shock obtains, growth is facilitated—*ceteris paribus.*

*Economic Institutions.* Unionism and collective bargaining can conceivably influence the pattern of growth via economic institutions by affecting the "degree of monopoly" prevailing in the product market of the given industry. Does, then, unionism have any significant influence in this respect? First, to establish the logic of this relationship; and then to inquire whether the logic prevails in the world of stubborn facts.

If we assume that union policies press for uniform economic gains which some firms in the industry can "afford" while others cannot, then the marginal firms will be driven out of business and the degree of concentration in the industry increased, other things equal. And im-

[12] G. F. Bloom, "Unions and Technological Progress" (unpublished doctoral dissertation, Harvard University, 1946).

[13] The impact of union pressure on the search for laborsaving devices will vary with (among other things): the product market structure; the nature of the union pressure; the cost and administrative structure of the firm; the state of the relationship between the union and the management; the phase of the business cycle; the historical stage of the industry—growing, declining, or stationary.

plicit in the preceding conclusion are these two further assumptions: that labor costs are a significant factor in the relevant production functions and that product differentiation is not so marked as to permit the appropriate differential price adjustments necessitated by union policy.

Now, given the importance of labor costs and the nature of product differentiation and the further fact that the "ability to pay" varies among firms in any industry, the realization of a significant increase in the degree of monopoly will depend on the extent to which unions do in fact pursue uniform policies in the industry regardless of the ability to pay of the marginal firms. And that, in turn, will be a function of the scope of the bargaining unit.

Where the bargaining is conducted on an individual firm basis, with relatively little policy leadership exercised by any one firm or group of firms, then, of course, unionism does not in any way lead to an increase in concentration; for in these instances, the settlements will vary between firms and will be conditioned in no small degree by ability to pay.

In those instances where individual firm bargaining prevails but with a leadership policy in the industry, there is a much greater likelihood for concentration stemming from uniform collective bargaining practices. But does this likelihood materialize in reality? Industries characterized by such a bargaining structure are usually characterized by a considerable degree of monopoly in the form of oligopoly. Automobile and steel are cases in point. Which means that while union policies may facilitate the swallowing of the pygmies by the giants, these reservations must be kept in mind: (1) The giants may be anxious to keep the pygmies in business even if only to ward off antitrust action and may, therefore, strike bargains with the union at a level which the marginal firms can afford to meet. (2) There is considerable evidence to indicate that even in bargaining units where there is considerable leadership in collective bargaining, the unions will very often work out particular adjustments with firms that are in a weaker financial position. Thus, for example, when the steelworkers negotiated pension plans with the larger steel companies in 1949 and 1950, they did not impose such plans on the smaller concerns that were unable to finance them. (3) And even if we disregard the preceding points (which one should not) and therefore conclude that the degree of monopoly is increased, such increase will not be too significant, given the degree of monopoly already prevailing in the industry.

In industries where multiemployer bargaining prevails, either of the market or nonmarket type,[14] the trend toward reasonably uniform

[14] For the meaning of these concepts, see J. Shister, "Trade-Union Policies and Nonmarket Values," *American Economic Review*, May, 1950.

settlements in the bargaining unit is, within limits, clear enough.[15] But in these instances there is little likelihood of any significant degree of concentration because such bargaining units are composed of relatively large numbers of firms, many of them small in size.[16] To begin with, there are too many firms in the unit to constitute even a weak oligopoly. Furthermore, if some form of oligopoly is established, it is bound to be temporary, given the ease of entrance into many of these industries. Commerical printing and the needle trades are cases in point.

In sum, then, uniformity of policy by unions does not in any significant way contribute to industrial concentration.

*Government Policy.* The influence of trade-unionism on the pattern of growth via governmental policy has been indirect and more potential than actual. It has been indirect in that whatever success the labor movement has had in orienting government policy has influenced growth by first affecting business decisions. It has been more potential than actual in that while trade-unions have exerted some important influences on government policy, such influence has not even begun to tap the potential political power of the labor movement.

Organized labor did, of course, contribute to the passage of such laws as the Norris-LaGuardia Act, the Wagner Act, and various types of state legislation favorable to unionism. Nor should one omit the efforts of organized labor—very successful under the Democratic Administration—to have "favorable" officials put on strategic administrative agencies and in crucial executive posts. All that spells the ability of unionism to encourage the passage and administration of legislation which facilitates increases in union membership. But the impact of these various laws on union collective bargaining practices, particularly those that conceivably might affect the pattern of economic growth, has been negligible.[17] And so the question that must concern us here is this: How does the extent of union organization influence the pattern of economic growth? The answer depends, first, on whether one reaches the conclusion that collective bargaining practices affect growth and, secondly, on what proportion of workers in the labor force are organized. If one is ready to defend the thesis that unionism significantly affects the patterns of growth—a point here denied—then the answer to our question is obvious, and we need not raise the second point. If, however,

[15] Note carefully that, first, we speak of a "trend" toward uniformity, and not "currently prevailing uniformity." Note, furthermore, that "uniform settlements" need not mean uniform costs; for example, if the uniformity relates to piece rates, costs can vary significantly among the component firms.

[16] Cf. G. G. Somers, "The Future of Pattern Bargaining," *Southern Economic Journal*, April, 1952.

[17] Various provisions in the Taft-Hartley Act and legislation in a number of states do bear on certain union practices, but they do so in a restrictive fashion. And thus far the labor movement has been unsuccessful in either amending or repealing this type of legislation.

one argues that union collective bargaining practices in and of themselves do not significantly affect growth, one may still argue—as we have done above—that if the bulk of the labor force is organized on the one hand and no legislation prevails to regulate union admission policy on the other, then unions may restrict the total supply of labor and, therefore, reduce the rate of economic growth.

The labor movement has also been reasonably successful in contributing to the passage and liberalization of minimum wage laws, social security, and unemployment insurance statutes. Now, then, have these government policies affected the pattern of economic growth? The answers would vary considerably among economists.[18] My own, which space limitations prevent me from elaborating, are these: The laws, as enacted upon to the present, have not significantly affected the pattern of growth. Unemployment insurance may affect the form but not the rate of growth by influencing—to some degree—the cyclical variations in employees' cash receipts. Social security may or may not influence the form of growth, depending upon the underlying economic conditions when the net balance in old age reserves is changing significantly; and it may also influence the rate of growth somewhat by discouraging older workers from seeking employment, and therefore reducing the total labor supply. The latter point assumes, of course, that the economy is operating at or near full employment for relatively long periods of time. But note that even if unemployment insurance and social security do have an influence on growth, these points must be kept in mind: this influence is far overshadowed by other determinants of the pattern of growth and both types of social legislation would probably have emerged even without union lobbying, although probably not in the exact form they did.

Since 1932 unionism has undoubtedly had some influence on the development and changes of the tax structure, but at the present time with the present sources of information it is impossible to say how much of an influence. Now, here we have a governmental policy which is of the profoundest importance for the pattern of economic growth. But my guess would be that in this area the influence of unionism up to the present has not been of great significance. But whatever influence there has been has probably been in a direction which, inadvertently or not, has discouraged long-run economic growth in varying degrees.

Thus far we have dealt with the actual influence of unionism on government policy. But what about the potential impact? Here the picture is radically different, for the labor movement has tremendous political potential. True, the political orientation of American unionism today is still in its embryonic stages. Currently the American labor movement is business-minded rather than political-minded. But the absence of

[18] Cf. J. Shister, *Economics of the Labor Market* (New York, 1949).

political orientation is not synonymous with the absence of political potential. A labor movement of close to sixteen million members has an immense reservoir of political strength. And if this potential should be harnessed and articulated in the form of, say, an organized labor party, then trade-unionism could exert a very profound influence on the tax structure, the distribution of income, etc.

Anyone who questions whether labor can radically influence government policy when it harnesses and articulates its full voting power has but to glance at developments in the United Kingdom and—to a lesser degree—the evolution of public policy in the Scandinavian countries. But the crucial questions remain: Will American labor turn to a labor party or something strongly resembling it? And if so, how will its policies at the governmental level influence growth? We shall turn briefly to the first question at a later juncture. As for the second question, these points should be made: (1) While the American labor movement will be influenced by the experience of foreign trade-unionism, it will not adopt their policies in any slavish fashion, in part, because it will have observed the failure of some of these policies abroad (the American labor movement will not be starting from any "theoretical" blueprint as the British movement did) but in part also—in the main perhaps—because the socioeconomic setting of American unionism is different from that prevailing abroad. (2) The unions will press for a more egalitarian distribution of income via taxation policy, subsidies, etc. (3) They will be less concerned with the speed of economic growth than with the stability of the growth. (4) They will be more concerned with full employment than with the rise in the standard of living. Assuming, therefore, that there are no counteracting influences to these policies (for example, war or the imminent threat of war and the need to accelerate production; or intense foreign competition for markets, assuming we need foreign markets badly; etc.), they spell a slower rate of economic growth and a different form (probably more stable).

*The Over-all View.* From this brief analysis of the impact of unionism on economic growth, the following conclusions emerge: In the area of direct collective bargaining, the impact of unionism has been relatively negligible. In the area of union influence on government policy, the actual impact, while perhaps somewhat greater, has still been far from significant. But the union potential in this area, unlike the one in direct collective bargaining, is immense.

The above conclusions have been reached dominantly on a deductive basis. What about inductive evidence? Let us say at the outset that conclusive evidence (one way or the other) would consist of this: A comparison of the patterns of economic growth in two nations that are identical in every conceivable way except that one had a powerful

union movement and the other no unionism at all. But no such animal exists; nor should one realistically expect it to exist if for no other reason than the fact that if two nations are identical in every way they will not breed radically different patterns of union growth. But the inability to obtain conclusive evidence—100 per cent fool proof—should not deter us from seeking corroboration or refutation by means of suggestive evidence. A few fragments of such evidence will now be noted.

Productivity per man-hour is obviously one of the crucial components of the rate (and to some extent even the form) of economic growth, as we have defined the latter term.[19] We have already indicated the reasons for believing that union policies have not significantly affected productivity per man-hour. It is, therefore, interesting to note that if we compare Mills's productivity data with variations in union strength for the period 1918-50, we find no significant correlation between the two.[20] Similarly, if we compare industries characterized by differing degrees of union organization, we find no significant correlation between changes in productivity and union strength.[21] It goes without saying that the preceding data do not prove our thesis. But they are consistent with it.

Income distribution—notably between profits and wages—is certainly a factor which can markedly affect the pattern of economic growth through various channels. And yet the available studies point to the conclusion that American unionism has not affected income distribution in any significant way.[22]

To deal with patterns of growth in particular industries does not, of course, automatically provide results applicable to the economy as a whole. Still, some insight into the relationship between growth and collective bargaining in specific industries may provide us with clues —at the very least. And in that regard the bituminous coal industry is a relevant example. During the twenties and thirties of this century the industry was declining despite the weakness of unionism during

[19] In some definitions of economic growth, this factor is even a more crucial component. Cf. J. A. Schumpeter, "Theoretical Problems of Economic Growth," *Journal of Economic History*, Supplement VII-1947, p. 2; F. C. Mills, *Productivity and Economic Progress* (*Occasional Paper 38*, National Bureau of Economic Research, 1952), p. 10, Note 6.

[20] According to Mills (*op. cit.*, and his paper in *American Economic Review*, May, 1952), productivity increased rapidly between 1918 and 1924 (when unionism was weak), slowly between 1924 and 1932 (unionism still weak), rapidly between 1932 and 1941 (unionism strong), slowly between 1941 and 1943 (unionism strong), rapidly between 1943 and 1950 (unionism strong).

[21] Cf. J. T. Dunlop, "Productivity and the Wage Structure," in *Income, Employment and Public Policy* (New York, 1948), pp. 352-353; U.S. Bureau of Labor Statistics, *Productivity Trends in Selected Industries*, Bulletin No. 1046, 1951.

[22] H. M. Levinson, *Unionism, Wage Trends, and Income Distribution, 1914-1947* (Ann Arbor, 1951); P. E. Sultan, "Unionism and Wage/Income Ratios, 1929-1951," *Review of Economics and Statistics*, February, 1954.

most of this period. By contrast, the industry expanded during the forties when unionism was very strong. Obviously one can argue that it might have expanded even more rapidly in the latter period in the absence of collective bargaining. That may or may not be so, but there is no rigorous inductive method now available for establishing that. More important, from a pragmatic point of view, is this: Despite a very militant union in an industry where labor costs are approximately one-half of total costs, the industry expanded. Factors other than unionism and collective bargaining have, therefore, been significantly more potent in determining growth. And again the data are more consistent with our thesis than with the opposite one which might attribute significant influence to unionism in determining industrial growth.

The thesis here presented receives further corroboration from a recent study by Oliver and Witney.[23]

## II

Granted, then, that union policies have influenced the pattern of economic growth only negligibly in the past, does it automatically follow that the same will be true in the future? Obviously not. The future trend of union policies will depend on the direction taken by those forces which fashion union policy. Time limitation dictates a mere cursory listing of these forces without any elaboration of their *modus operandi*. They are: the work environment; trade-union leadership; and the socio-legal framework.[24] And over the long pull, only the first two are independent, the third being derived from the other two. Furthermore, union leadership can orient policy only within the limits set by the work environment; and oftentimes these limits are surprisingly narrow.

The pattern of economic growth operates through the work environment by influencing, both directly and indirectly, such factors as the rate of upward occupational mobility, changes in the level of employment, the structuring of occupations, etc. Since these factors affect union policy on the one hand and unionism does not affect them in any substantial measure on the other, it follows that there is no reason to expect union policies to change in the future unless the pattern of growth changes as a result of forces over which the unions have little or no control. Now, if the pattern should change in a manner which

[23] "Union Strength and Factory Employment," *Southern Economic Journal*, July, 1953. Note, of course, that the authors of this study are dealing with employment rather than production. But that only makes the case all the stronger for our thesis, for production data would show up even more favorably for the union sector if one grants that unions do not receive lower rates than the unorganized and there is always some possibility of substitution between capital and labor.

[24] For the meaning of these concepts, see J. Shister, "The Logic of Union Growth," *Journal of Political Economy*, October, 1953.

would make it very difficult for the unions to satisfy their job goals through collective bargaining, then they would of necessity veer toward political activity on a large scale; and if the situation should be critical enough over a sustained period of time, the formation of a national labor party is not at all out of the question. If such a party is formed, and if it gains political power, then it can significantly affect the pattern of economic growth through its impact on government policy. And such change in the growth pattern may well reorient the entire structure of the economy so that capitalism as we know it today would become mere history.

We are arguing, in effect, that this complete change in the structure and operation of the economy, if it should materialize, would stem ultimately not from trade-unionism but from other and more powerful forces operating in the economy. Trade-union policies would initially be merely a reaction to these forces. But the initial reaction, having set in, would in turn accentuate those forces which were originally responsible for the reaction itself.

In a word, the future impact of trade-unionism on the basic orientation of the American economy hinges in very large measure on the future pattern of economic growth. If this pattern continues to be satisfactory, trade-unionism will continue to focus dominantly on job problems through the medium of collective bargaining. Such focusing obviously alters very radically the character of worker-employer relationship with the passage of time. But this alteration, while very important for the parties directly concerned, does not spell any basic reorientation of the capitalistic engine. Certainly it does not spell the destruction of the engine. Quite the contrary, it will help preserve it,[25] provided those forces which have been responsible for the success of capitalism, and over which unionism in America up to now has had very little control, do not take a long-run turn for the worse.

[25] Cf. J. Shister, "Trade-Union Policies and Nonmarket Values," *American Economic Review*, May, 1950.

## DISCUSSION

JAMES M. BUCHANAN: I think Dr. Hoover has succeeded in providing us with a more descriptive analysis of investment for the individual firm. He has demonstrated considerable dexterity in weaving into his model several of the more important institutional characteristics of business investment in the modern economy. But do we desire more descriptive theories? Or do we desire theories which will enable us better to make certain predictions about the behavior of economic units under specified conditions? Hoover would perhaps answer "yes" to both of these questions, but he would probably be inclined to the view that theory must be adequately descriptive in order to produce good predictive results. But the question as to whether or not the assumptions of theory are superficially descriptive is essentially irrelevant. The sole test of the true realism of theory lies in its ability to help us make predictions, and a theory which is seemingly realistic in its assumptions may come off with a very poor showing when its predictive results are compared with a theory which is apparently less descriptive but more discriminating in its assumptions. The fact that the real world is neither perfectly competitive nor perfectly monopolistic provides no basis for discarding competitive theory and monopoly theory. These may be discarded only if and when other theories appear which provide better results.

Let me follow this approach through in relation to the interesting supply-of-funds curve facing the individual firm which is developed by Hoover. Does the replacement of the orthodox horizontal supply schedule (Figure 1*a*) by the proposed stepped and unsloping curve (Figure 1*b*) enable better predictions to be made concerning the responsiveness of investment to interest rate changes?

Let us examine the stepped portions of the supply curve more closely. If firms do somewhat automatically reinvest depreciation reserves and all profits above some normal rate of dividends, are they not entering the market for investment funds on both sides? Are they not both supplying and demanding these reinvested funds? If this is true, how can their behavior in this respect affect the price of funds (interest rate) established in the market? If no effect is produced unless a firm enters the market either as a net demander or a net supplier, is it not simpler to let equals cancel equals and revert to the orthodox version? In this way, a firm would be considered to demand investment funds only if it entered the external market. The rate of return must be determined in the external market alone. Dr. Hoover's analysis may well (and I believe does) lend itself to a more descriptive picture of the firm's investment decisions, but if we are interested in the formation of prices, we are not interested in the firm's decisions per se. Rather we are interested in them only insofar as they affect price formation. In this respect his analysis appears to add very little.

There are some significant implications of Dr. Hoover's analysis for the topic of this session and here we should be interested in the behavior of individual

firms per se. But Dr. Hoover seems to stop short of asking the significant questions relevant to economic growth. The really important one would seem to be: Do the institutional changes outlined make for more or less capital accumulation?

If we accept fully Dr. Hoover's analysis as "realistic" of firm behavior, what changes are portended in the rate of economic growth? If the supply-of-funds curve facing the firm is upward-sloping, the rational firm will tend to restrict investment below that which is optimal in terms of the over-all allocation of economic resources. This will be true because the marginal cost of securing added funds exceeds the average supply price of such funds insofar as the firm is not a discriminating monopsonist. It is no doubt true that the firm may be considered a discriminating monopsonist over the stepped portions of the supply curve; that is, the plowing back of some profits will not increase the reservation price for depreciation reserves, and recourse to external funds need not increase the reservation price on the use of internal funds. For the portion of the firm's funds supply schedule representing external funds, however, it seems apparent that the firm is not likely to be able to discriminate, even if it is a monopsonist. The conclusion emerges, therefore, that for those firms whose demand for gross investment is sufficient to warrant their entry into the external funds market, investment is restricted below that which is socially optimum.

On the other hand, if the preference for internal financing is strong, and firms irrationally restrict the payment of dividends to some standard level, automatically reinvesting all profits above this, some firms may invest larger amounts than is socially desirable. If a firm supplies to itself funds at rates of return lower than such funds could earn if invested elsewhere, and if the demand for gross investment indicates that the firm requires no external financing, then the firm will tend to extend investment beyond the socially optimum amount.

We reach the interesting conclusion that for firms which need to secure funds from the external market, investment is restricted below the social optimum, while for firms which do not need to have recourse to external funds, investment is greater than the socially optimum amount.

If we reintroduce the orthodox horizontal supply curve facing the firm when it enters the market for external funds, as I think we should, the first influence disappears, and we are able to reach the definite conclusion that the irrational preference for internal financing does on balance tend to cause investment to exceed that which is optimum. I think, however, that here we must emphasize the distorting effects on the structure of investment rather than the total effect on the volume of investment. The preference for internal financing tends to distort the structure of total investment toward those firms which are established and which have made sizable profits. Of course, profits are the best signals for appropriate investment, but the phenomenon of internal financing tends to make the criterion past profits rather than expected profits. Clearly the result is to extend investment in going concerns relative to investment in new firms beyond that which would be socially most desirable. Whether or not the institutional change which causes firms to almost automatically reinvest all

their profits above a fixed rate of dividend payments becomes a form of forced savings seems somewhat more questionable, but this might be tentatively advanced as a working hypothesis. If this is true, then the rate of capital accumulation is increased and hence the potential rate of economic growth.

Dr. Hoover's interesting analysis also has significant implications for macroeconomic theory. If firms do consider dividends somewhat as fixed claims and internal financing does become a sort of residual claimant of profits over and above fixed dividends, the level of investment is closely related to the level of income. This seems to breathe new life into the acceleration principle as a tool of analysis, not in the orthodox sense of a direct derivative relation between consumer goods output and capital goods on the demand side, but rather in the sense of a chain relation between income, profits, and investment demand.

Institutions must always be considered as variables in any complete analysis, and, as variables, they may be dependent as well as independent. This introduces my final comment on Dr. Hoover's paper, which somewhat inferentially applies to most of Dr. Shister's paper.

I am primarily concerned here with the policy implications of the economist's incorporation of institutional changes into his theoretical models. If we are to fulfill a purely scientific role, we must, of course, observe all institutional change with perfectly objective detachment, incorporate the appropriate institutional factors into our predictive models, and by so doing improve our score. But can we afford to neglect completely the spill-over effects of our behavior in attempting to be scientific upon public opinion and ultimately on economic policy? For the economist such effects are ever present. Our science can by its very nature never be isolated from public opinion.

Should we not be extremely cautious in modifying our theoretical models in such a fashion as to make more permanent those institutional changes which we, as moralists, consider to be undesirable? By the introduction of undesirable changes into our theoretical structure, do we not thereby give such changes an aura of legitimacy?

We may all agree that neither business monopoly nor labor monopoly has exerted the disastrous effects upon economic efficiency or economic growth which some of our more static models would indicate. The degree of competition in all markets is greatly increased by the process of growth, and this point is seldom sufficiently stressed. And we are certainly better off because business firms sometimes do not exert all their potential monopoly power and may instead operate in accordance with the principle of the "invisible left hand." This principle, for which I give credit to the late Dr. C. O. Hardy, says that business firms will act in the public interest because by so doing they will more or less automatically be furthering their own interest. Similarly for labor unions. We are better off because they are not necessarily the economic villains they have been sometimes painted. But it seems to me that we may rest assured that those of our open-shop profession who have surrendered their souls to either of the two interest groups will keep us and the public adequately informed of the public beneficence of both big business and big labor.

The pronouncement by the academic economist that monopoly as a struc-

tural form may not always lead to undesirable social results and that price fixing may sometimes have negligible effects on efficiency and growth, must do its bit toward making monopoly and price fixing, as social institutions, permanent. Do not all theories of countervailing power reduce to apologetics for power itself? We, as economists, must feel some responsibility for shaping public policy, however small our influence, toward a less monopolistic economy.

J. Curt Victorius: Dr. Hoover has presented the "new look" of investment determination within the firm. With his exploratory work in this particular field, Dr. Hoover is giving invaluable technical aid to a markedly underdeveloped area of professional knowledge. Much of what Dr. Hoover brought out is manifestly in line with findings of other pioneers in this field. This is true in regard to both aspects of investment decisions with which Dr. Hoover has been concerned in his paper: decisions as they affect the programming as well as the financing of investment outlays.

There is a wide margin of agreement, it appears, that wherever feasible management today tends to embrace a broad and long-term outlook on investment opportunities. This naturally implies that the relevant considerations which enter into the appraisal and selection of investment proposals include broad elements of grand strategy and top-level judgment which defy quantification. Dr. Hoover has stressed this point, and so have others. It is obvious that where such long-range approach is practicable, the success of its practice depends to a large measure upon proper institutional environment and arrangements, foremost among them a high degree of independence of the management group.

In referring to "the management group" Dr. Hoover does not specifically distinguish between its directing and executive parts. This seems fully justified considering the "human mix" that prevails in small and large corporations alike between the board of directors and executive management. I submit, however, that in view of the complexity of decisions involved in a long-range policy of investment, as well as for other reasons, a controlling representation of executive management on the board appears to be justifiable only if it does not develop into unrestrained authoritarianism or possibly one-man dictatorship. Such unchecked concentration of control does not always augur well for wise decision-making, as experience here and abroad has taught. There are instances, of course, especially in the case of large business combines, where such fusion of authority makes for a higher degree of efficiency and insures greater promptness of action. In most such cases, procedures and instrumentalities have been established to achieve and safeguard a pooling of judgment. Moreover, in some instances top-level executives have been freed from day-to-day administrative routine, making them virtually the directing authority, operating as a team. By and large, however, there can be little doubt that a clear delineation of authority within the relevant management group and the presence of independent personalities on the board with an experience longer than or different from that of management will engender a higher degree of collective wisdom than a board more or less dominated by executive management.

Dr. Hoover's exploration of investment decisions as they affect the use of the various sources and modes of financing has brought to light valuable and helpful information. Again, many of his findings are in accord with those of others engaged in similar research. However, in order to put Dr. Hoover's contribution into proper perspective, I find it necessary to distinguish between the actual findings of his exploratory work and their use for purposes of generalization. It is with regard to the latter that I have reservations.

I refer to Dr. Hoover's interesting and challenging redraft of the neoclassical supply schedule of investment funds. In it, Dr. Hoover attempts to bring into focus the main ingredients of modern investment finance as his explorations found them. Thus we see the various sources of investment outlays arrayed on the Hoover curve in the order in which managements report their deployment, with further consideration of the fact that these reports seem to justify the imputation of different levels of return to the different sources.

I find it difficult to follow Dr. Hoover in his generalizations. I believe we can all agree that investment proposals generally are being subjected to a screening process. This process has to take into consideration the future cost of operation, maintenance, and wastage involved in the added assets, and the effect of this cost on the over-all earning power of the firm, regardless of whether the source for investment outlays is internal or external and, if internal, whether limited to the extent of available depreciation accruals or not. Furthermore, there can be no disagreement that, for a multiplicity of reasons, management may be induced to devote internal funds to investment outlays of comparatively low return. Income tax considerations and preservation of the market position may be among them. This point has been brought out by speakers in several sessions and there is no need here to elaborate on it. On the other hand, it appears that firms frequently set an extremely high price tag on the preservation of their liquidity position, even to the extent that, where cash considerations play a significant role, internal financing may pre-empt the most profitable investment outlays, leaving projects yielding a lower rate of return to external financing.

There are indications today that the strong postwar preference for internal financing has reached a turning point. Recent data portraying the aggregate situation show that in order to check the continued decline in their liquidity positions some companies have even gone so far as to build up their liquid asset holdings with the proceeds of security issues. Moreover, with the recent decrease in the volume of funds available from operations it is quite possible that the percentage share of internal financing in total corporate financing is not undergoing a considerable change in the long run. With the gradual development of lower dividend yields, increasing recourse to external equity financing is not unlikely. Among indications in that direction is the sizable increase in financing through bonds convertible into common stock. Incidentally, this goes to show that in appraising investment decisions, anticipated structural changes through time must be taken into consideration. My conclusion, then, is that the Hoover curve may at best portray a short-run condition but does lend itself for use as a general analytical tool.

Turning now to Professor Shister, the impression which is immediately

gained from his paper is the breadth of its scope and the transparency of its composition. Professor Shister chose to deal with his subject on an over-all level, relating union practices and policies to the growth pattern of the American economy as a whole. This approach has both its merits and its shortcomings. The main merits, as I see them, lie in the possibility of bringing analytically to light all facets of the relevant relationships between unionism and economic growth. I find Professor Shister's paper most helpful and enlightening in that respect. But to leave the discussion on the same lofty level when it comes to appraisal and evaluation has definite drawbacks. It necessarily entails a high degree of individual judgment and a broad margin of discretion. Realistic appraisal of policy becomes increasingly difficult the farther it is removed from the locus of impact. After all, growth of the economy is the resultant of forces which entail accelerated progress in one segment or region and retarded or impeded growth in another. And union policies and practices are brought to bear on firms, industries, and regions in their specific socio-economic and physical environment, almost invariably affecting them in a differential fashion. An attempt to put the divergent effects on a common denominator is, it seems to me, a most difficult undertaking.

To illustrate my point: In discussing market bargaining and the tendency toward wage uniformity, Professor Shister concludes that their spread has probably reduced horizontal labor mobility but not to any significant degree, for one, because even under market bargaining wage differentials between firms still prevail. In regard to union practices which tend to compress wage rates between various degrees of skill, Professor Shister refers, as a point of analysis, to their potential adverse effect on productivity while, as a matter of evaluation, he avers that this policy has been very far from universal either in time or space. Now there can be no disagreement as such with any of these statements. The question merely is: how meaningful are they for a clarification of economic growth problems? What concerns the student of economic growth in this particular context is, I submit, the need to establish some evidence as to whether the application of uniform wage policy has been too inflexible in one situation and flexible enough in another for the benefit of economic growth. To make my point quite clear, let me refer to such a particular situation: the effect of uniform wage policy on bituminous coal. Professor Shister cites the coal industry as a relevant example of a situation where, despite a very militant union and a very high share of labor costs in total costs, production expanded. Again, there can be no objection to the statement as such. But also again, how much does it really tell? May I adduce evidence from Professor Somer's recent study of bituminous coal to show that in order to reveal relevant relationships between unionism and economic growth, analysis has to penetrate further. Professor Somer's study brings out the fact that the extension of unionism to the southern Appalachian area in 1933, the outright elimination of day-rate differentials between North and South in 1941, and the policy of across-the-board increases in 1946 reduced the rate of increase of the South's share in total production in the thirties and the forties until an expanding southern coal market in combination with an accelerated rate of mine mechanization offset the loss of the previous advantage in wage rates.

However, there is evidence at the same time that within the Appalachian area production trends have been unequal, due to the fact that the effectiveness of mechanization in coal mining varies according to differences in physical environment. Thus the share of total coal output has been increasing in West Virginia, Kentucky, and Virginia, and declining in Tennessee and Alabama.

Now, I am not suggesting that the granting of adequate wage differentials to coal mining in these two states is the only or necessarily the desirable remedy for overcoming their handicap in economic growth. It is conceivable, even if unlikely, that such a policy may induce migration of the labor force to the neighboring higher wage area and thereby worsen instead of improve the wage cost situation in the two affected states. What I do suggest, however, is that an awareness of differential impacts of union policy wherever they occur is an important element in the understanding of economic growth problems, whatever the policy implications may be.

HOWARD R. BOWEN: The 1953 meeting of the American Economic Association illustrates the eager interest of our profession in secular economic change. No less than six out of twenty-four sessions (one-fourth of the total) have been devoted to economic development or growth or long-term change. One of these six is, of course, this very session for which the announced theme is "Growth Decisions in the American Economy."

Ten years ago, neither of the splendid papers we have heard would have been billed under this heading. Mr. Hoover's paper would have been presented in a session devoted to the theory of the firm and Mr. Shister's in a session on labor economics. No one would have thought of combining them under the general rubric of economic growth. I do not mean to suggest that you have been lured here under false pretenses. I am merely offering a footnote on semantics and fashions in economics. Despite this comment, I shall address my remarks to the subject of growth decisions.

Mr. Shister has undertaken to refute the proposition that trade-unionism has impeded the average rate of growth in the American economy. He concludes, quite rightly I think, that it has not. I should have been interested to hear him discuss what seems to me an equally plausible proposition; namely, that trade-unionism has, or may, increase the rate of growth. It is at least possible that the effect of labor organizations on the morale, security, and education of workers may be favorable to productivity in the long run. It is possible also that, as unions achieve wider membership, they may become increasingly cognizant of the relation between productivity and wages and may not only abandon restrictive practices but even make positive contributions toward raising productivity.

Mr. Hoover has considered factors influencing the investment decisions of firms. He regards the firm as a social institution having multiple values, subject to many influences and pressures, and operating in a world of uncertainty. He indicates that the actual behavior of enterprises with respect to investment probably departs significantly from that described in conventional economic theory, and he intimates that the way to greater knowledge of investment decisions is through empirical observation of actual firms. I find this point of

view and the conclusions eminently reasonable. I was particularly impressed with the ingenious analysis of the relation between investment decisions and sources of capital funds.

Apparently, the underlying presupposition of Mr. Hoover's paper is that investment decisions of firms are a major determinant of secular economic growth. It is toward this presupposition that I shall direct my comments.

First, an obvious point. Mr. Hoover devoted his attention entirely to the investment decisions of going enterprises. But a substantial part of economic growth occurs through the creation of new firms. The decisions involved in starting new firms are probably quite different from those in expanding existing firms. A study of the investment decisions of new firms, paralleling Dr. Hoover's paper, would be instructive.

Second, I question whether the investment decisions of firms, whether old or new, are major determinants of secular growth of the economy. In the long run, the rate of growth is determined by changes in the labor force—in its numbers, composition, and productivity; by the discovery and development of natural resources; by improvements in technical and organizational efficiency; and by the rate of saving. The decisions of firms which affect growth are those which influence these basic determinants. Clearly, firms do many things which affect productivity of workers, supply of natural resources, efficiency, and rate of saving. But it is at least doubtful if their investment decisions per se are major determinants of secular economic growth. This would be true only on the assumption that decisions to invest automatically call forth the necessary capital funds. This, I think, is a questionable assumption.

It is true that a large part of business investment is internally financed. But it does not follow that the amount of business saving is uniquely determined by the opportunities for investment. It is also determined by the rate of profit and by the obligation, or necessity, to pay dividends. Moreover, business saving—important as it is—is only a fraction of total saving. The remainder of saving comes from households and is probably very inelastic with reference both to the interest rate and to investment opportunities.

It is true that in times of depression, autonomous increases in investment will raise the national income and so increase the rate of saving. But this point of view is not relevant when we are considering secular growth. In the long run, the rate of investment is dependent on the rate of saving; hence it is decisions on saving rather than decisions on investment which determine the rate of capital growth. And assuming that the rate of saving is given, investment decisions are more influential in determining which firms expand than in determining the growth of the total economy.

The crucial decisions of enterprise that bear on the rate of capital formation, therefore, are decisions regarding business saving rather than decisions regarding investment. Investment decisions are important insofar as they influence the rate of business saving. But it is primarily the latter which is of concern in a discussion of secular growth.

# DIMINISHING INEQUALITY IN PERSONAL INCOME DISTRIBUTION

## Relation to Functional Distribution and Factor Compensation

## FUNCTIONAL AND SIZE DISTRIBUTIONS OF INCOME AND THEIR MEANING

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For a long time, empirical research on the distribution of income by type and by size, respectively, pursued independent paths, using to a large extent different basic sources and definitions of income. In the meantime, students of size distributions of income have become increasingly aware of the fact that the degree of inequality shown by a given distribution is dependent on the underlying definitions of income, recipient unit, and income period.

Moreover, it is increasingly realized that the relative income position in a given year is only one element in determining the level of living. In the long run, other factors, such as the size of the stock of durables in the hands of consumers and the amount of free government services available, are likely to be of increasing importance.

Therefore there is a growing tendency to place less emphasis on the degree of inequality and more on the underlying forces which are mirrored in changes in income-size distributions. We have, indeed, gone a long way since the time when preoccupation with income-size distributions was more or less left to statisticians who were seeking to reduce them to a simple formula based on some probability scheme.[1]

In trying to account for cyclical and secular changes in income-size distributions it is logical to seek in the composition of income by type one of the major explanatory variables. This has been done mainly by examining the shares of various types of income in specific income strata. A broader problem is to bring empirical income-size distributions into a closer relationship with economic theory.

Distribution theory deals with functional shares in national income. In order to trace the way in which market forces and other economic and extra-economic factors, which determine the employment and re-

[1] The best up-to-date review of work in this field known to the author is by Jorge Kingston, "Inequality of Income Distribution," *Revista Brasileira de Economia,* March, 1952 (text in Portuguese with an English summary).

sources and their prices, are translated into individual incomes of a given size pattern, a bridge must be built from a type distribution of national income to a personal income distribution by size.

I shall first discuss some problems involved in relating income-size distributions to distributions by type and then raise some questions on the interpretation of income-size distributions.

## I

A good deal of research on functional distribution of income, or more precisely on the distribution of income by type, has been published recently.[2] Considerable progress has been made also in constructing personal income-size distributions and in relating changes in such distributions to the underlying economic forces. Size distributions have always been a somewhat synthetic affair, although a considerable amount of work had gone into making numerous adjustments, interpolations, and allocations required to derive comprehensive, consistent, and complete distributions from fragmentary source data.

While the first income-size distribution for this country to be based on a substantial body of empirical data specifically collected for this purpose was obtained for 1935-36, annual distributions for a number of consecutive years have become available only for postwar years.

Much of the early research into income-size distribution was focused on measurement rather than interpretation, although important pioneering work on its social and economic determinants has been done by Morris A. Copeland. In Kuznets' recent[3] study an important step was taken to relate changes in income-size distribution to changes in the composition of personal income by type for at least a limited segment of the income range.

A substantial step toward integrating size distributions with time series on total personal income has been taken recently by the Office of Business Economics, which last month published *Income Distribution in the United States* as a supplement to the *Survey of Current Business*. While not directly concerned with correlating functional and income-size distributions, it represents the first attempt I am aware of to allocate systematically the entire amount (rather than only certain types of income in kind, as was the case with the 1935-36 and 1941 surveys of family income) of imputed income by income-size classes

[2] Edward F. Denison, "Distribution of National Income," *Survey of Current Business*, June, 1952, and Jesse Burkhead, "Changes in the Functional Distribution of Income," *Journal of the American Statistical Association*, June, 1953. George J. Schuller, "The Secular Trend in Income Distribution by Type," *Review of Economics and Statistics*, November, 1953.

[3] *Share of the Upper Income Groups in Income and Savings* (National Bureau of Economic Research, 1953).

and to fully reconcile personal income-size distributions with the related time series.

I shall neither comment on any of these important studies specifically, nor make reference to the well-known difficulties arising when relating empirical series developed within the framework of national accounts to the logical categories of distribution theory. Instead, I shall concentrate on some aspects of measuring long-run shifts in functional and size distributions, thus neglecting the various aspects of cyclical fluctuations, to which several of the recent studies, including those mentioned, pay a good deal of attention. Furthermore, because

TABLE 1

EMPLOYEE COMPENSATION AS A PERCENTAGE OF TOTAL PERSONAL AND NATIONAL INCOME, SELECTED YEARS

| INCOME CONCEPT | SOURCE | 1929 | 1939 | 1941 | 1948 |
|---|---|---|---|---|---|
| National income | Denison, Schuller* | 58.1 | 65.9 | 61.9 | 62.7 |
| Primary income I | Burkhead† | 58.8 | 65.4 | 63.9 | 64.5 |
| Primary income II | Burkhead† | 57.9 | 64.1 | 59.3 | 60.8 |
| Personal income | Creamer‡ | 62.6 | 68.2 | 69.2 | 70.9 |
| Personal income | Kuznets§ | 64.8 | 70.0 | 70.0 | 71.7 |

* Both series are identical.

† Primary income includes net government interest. Inventory revaluation adjustments are excluded from corporate profits and from income of unincorporated business. Corporate profits are after taxes in Concept I and before taxes in Concept II. Percentages computed from Burkhead's Table A.

‡ Creamer's "total labor income" corresponds to employee compensation in the other series. His personal income series excludes imputed interest.

§ "Basic Variant" which excludes imputed net rents and all imputed interest.

of time limitation, I shall confine my discussion to income before personal income taxes. I would like to mention, however, that Geoffrey H. Moore has found that only one-fourth to one-fifth of the decline in inequality between 1929 and 1948 can be traced directly to the incidence of personal income taxes.

Some broad conclusions emerge from the studies referred to, and some of the remaining differences can be traced to divergencies in concepts. The nature of these differences is exemplified in Table 1 in which the percentage share of employee compensation in income is shown for selected years. All these income variants derived from the OBE time series indicate that the bulk of the increase in the share of labor has taken place before the outbreak of the war (1941). The share of employee compensation appears smaller when measured against national income, which includes corporate profits taxes. It is larger in that variant of Burkhead's primary income series which excludes these taxes, but in which part of the effect of this exclusion is offset by the inclusion of government interest. The share of employee compensation is highest in the two personal income series. The slightly higher level

of Kuznets' series reflects the exclusion of imputed rents as well as of imputed interest from personal income.

As can be seen from the percentage changes shown in Table 1 (and also Table 2), the stability of the share of labor income is considerably reduced as we pass from national income (to which most statements on such stability relate) to personal income on which the size distributions now so widely used are based. Indeed, in the economy as a whole, the percentage increase in the share of labor in personal income between 1929 and 1948 was nearly twice as large (13.3 per cent according to Creamer) as in its share in national income (7.9).

TABLE 2

EMPLOYEE COMPENSATION AS A PERCENTAGE OF TOTAL INCOME IN CERTAIN SECTORS OF THE ECONOMY, SELECTED YEARS

| SECTOR | INCOME CONCEPT* | SOURCE | 1929 | 1939 | 1941 | 1948 |
|---|---|---|---|---|---|---|
| Ordinary business | National income | Denison | 61.7 | 66.0 | 60.9 | 61.4 |
| Nonfarm corporations | National income | Denison | 74.1 | 80.6 | 72.6 | 74.2 |
| Private nonagricultural | National income | Schuller | 59.7 | 66.0 | 62.1 | 64.4 |
| Corporate | Primary income I | Burkhead | 77.4 | 82.4 | 80.0 | 81.5 |
| Corporate | Primary income II | Burkhead | 75.0 | 79.1 | 69.3 | 72.9 |
| Nonfarm | Personal income | Kuznets | 68.1 | 73.5 | 74.5 | 77.5 |

* For definitions, see footnote to Table 1.

It has been widely noted that changes in income-size distribution, which have been called "revolutionary," especially insofar as they concern the share of the highest income groups, are in sharp contrast with relatively slight changes in the functional distribution of income. Kuznets has shown, indeed, that changes in the share of each type of income received by a given income group rather than intertype shifts are the main dynamic element in size distributions. The most important long-run shifts have taken place in the form in which property income is received rather than between labor and property income.

Changes in functional distributions of income produced, aside from cyclical factors and changes in the price level, may result from any of the following three groups of factors or their combination: (1) changes in the relative bargaining strength of factors of production; (2) changes in the proportion of inputs of various factors of production in a particular sector of the economy; and (3) structural changes involving changes in the relative weight of various sectors within the economy.

In addition, distribution of personal income by type may reflect: (1) deferment of income from current production to a later income period; (2) shifts between the corporate and unincorporated form of business, and changes in the proportion of corporate earnings disbursed as dividends; (3) changes in the proportion of employee com-

pensation which takes the form of business expense or is otherwise disregarded in the personal income accounts; and (4) redistribution through government transfer payments.

Distributions by size will be influenced, in addition, by a third group of factors, such as the way in which individual income recipients are combined into enumeration units, changes in rates of labor force turnover, and a number of demographic and related influences which I have discussed in some detail elsewhere ("Inequality of Income: Causes and Measurement," in *Studies in Income and Wealth,* Volume XV).

The first group of factors is concerned with forces operating through the price mechanism and which are the subject of most of the traditional distribution theory. They are undoubtedly of greatest significance in interpreting some of the basic long-run changes in our economy. The second group relates to the transformation and redistribution of factor earnings. They represent in part society's reaction to the distribution achieved by the price system and in part the business system's adaptation to the rules of play laid down by society, including those for the tax game.

Even though my discussion is confined to income before taxes, some of the greatest difficulties in relating functional to personal income distributions arise from the influence of the federal tax structure on the way in which income produced is distributed. Tax considerations enter into the conversion of corporations into partnerships (and vice versa), and they influence significantly the form in which additional corporate funds are obtained and the form of disbursement of compensation for personal services and their time distribution.

On balance, I would expect the relative importance of this second group of factors to increase, and this is the reason for discussing them here in some detail. Although their over-all impact on type and size distribution is still limited, the tracing of changes in the income-size distribution to the underlying shifts in the employment of factors of production and their prices is likely to become more and more obscured by the adaptation of the forms of compensations for personal services to the fiscal system. If we agree that the tax burden is not likely to become significantly smaller in relation to income produced, tax considerations are likely to play an increasing role in determining the form of business organization and the form and timing of the compensation of property, entrepreneurship, and labor.

The third group of factors affects merely the statistical mirroring of economic realities and is therefore, perhaps, of limited theoretical interest. These demographic and related factors, which keep the labor force and the number of income receiving units in continuous flux,

remind us that a certain degree of inequality in size distributions would exist even in a strikingly different economic organization, and that perfect equality, for this reason alone, is an unrealistic frame of reference for the statistical measurements of changes in the inequality of distribution.

Let us now consider in more detail the various factors in which we might find an explanation for long-run shifts in the composition of national income by type and of personal income by size. The present status of distribution theory and its contribution to explaining changes in the quantities of factors of production employed and their relative prices were explored at our meeting last year by Boulding, Fellner, and several discussants. (See also E. Preiser, "Property and Power in the Theory of Distribution," *International Economic Papers,* Volume 2.) It seems to me that our ability to rationalize empirical changes will depend not only on proper accounting for monopolistic elements and extra-economic influences but also on changes in factor inputs. This is increasingly recognized, although studies which I have seen hardly go beyond assembling statistical evidence of changes in the quantity of individual types of input[4] and of differential price changes.[5] Maybe empirical research has shied away from this important field because of the great difficulty not only in obtaining long-run input series but also in establishing equivalence over time. There are, in addition to the conceptual problems of relating theoretical categories of factor inputs to the standard categories of distributive shares, the problems of reducing heterogeneous elements to a common denominator.

While short-run changes in the distribution of income by type reflect primarily the degree of utilization of resources during the various phases of the business cycle, long-term changes are more apt to reflect structural shifts in the proportions in which factors of production are combined in the individual sectors of the economy and the gradual shifts in the relative importance of these sectors. It cannot be stressed enough that changes in functional distribution have a precise meaning only within fairly homogeneous areas of the economy. The combination of the several agents of production differs from sector to sector. In some areas of the economy certain factors are not used at all, as is more fully discussed by Denison. Thus, in order to make a more meaningful analysis of long-run shifts in functional income distribution, Denison singles out what he calls the "ordinary business sector" for special con-

[4] Jacob Schmookler, "The Changing Efficiency of the American Economy," *Review of Economic Statistics,* August, 1952, for instance.

[5] Moore, "Secular Changes in Distribution of Income," *American Economic Review,* May, 1952, p. 541; Creamer's forthcoming study contains more material along the same lines. There exists, however, substantial literature on the relationship between inputs, factor prices, and income in agriculture.

sideration, while Burkhead, with a similar idea in mind, focuses on the corporate sector. Similarly, Schuller presents a special analysis of the "private nonagricultural sector"—the nearest statistically feasible approximation to an ideal concept which, he suggests, should exclude all noncapitalistic sectors of the economy. (See Table 2 for a comparison of the share of employee compensation drawn from these studies.)

The share of labor in personal income is, indeed, more stable when the analysis is confined to the business sector than when related to total income; total income has grown more than income originating in the business sector, mainly because of the growth of government which, in our system of social accounts, originates labor income only.

It is likely that structural shifts among segments of the economy account for a substantial part of the long-run shifts in the shares of different types of income and in income-size distributions, as shown convincingly by Denison for the period since 1929. Among the most important factors contributing to the movement toward more equal distribution of total personal income are the increase in government employment, where dispersion is smaller than in the business sector, and a decline in the importance of farming, together with a shift of the mean agricultural income closer to the mean nonagricultural income.

The narrowing down of studies on changes of the respective shares of the various types of income to the business or the corporate sector represents only one aspect of the endeavor, discernible elsewhere in recent research, to go beyond the analysis of broad aggregates. Other attempts have been made along the lines of segregating executive compensation from wages and salaries, of estimating salaries separately from wages, of distinguishing between farm and nonfarm entrepreneurial income, of adjusting profits for amounts which small, closely held corporations make in the form of excessive executive salaries, and of distinguishing the labor and the property components in entrepreneurial income. Such rearrangements of published data, even at the cost of rather tenuous assumptions, are, in part, motivated by the desire to obtain time series more closely related to the theoretical categories of agents of production. In part at least, I believe, they arise from the suspicion that the relative stability of the share of labor income might involve some statistical fallacy.

A related broader problem in linking functional and size distributions of income is that of tracing the immediate form and timing of income received to its ultimate source. Transformations of one type of income produced into another form of income distributed are, indeed, a familiar problem, such as the conversion of rent into dividends and other types of income which has accompanied the spread of the corporate form of real estate management. A more extreme case is when government inter-

est payments, which are a form of transfer income, become distributive shares as part of corporate earnings. I would like, however, to place the emphasis on the deferment of factor payments beyond the current income period and on their conversion into types of income not falling under the currently accepted definition of personal income.

Indeed, many developments in the fields of collective bargaining and in the forms of executive compensation (in addition to the influence of taxation already mentioned) tend to widen the gap between personal income currently paid out (and entering income-size distributions) and the real factor earnings. In part, this gap manifests itself by the growing importance of deferred income, which appears in type distributions of income when earned, but in sample surveys of personal income and in tax returns when actually received. Under the heading of property income, its main component is investment income of private pension and retirement funds ultimately received by persons in the form of pensions or other types of transfer income. (A small part of investment income allocated to persons consists of investment income of nonprofit institutions which does not enter personal income-size distributions at all.) With the tendency of pension funds, confined in many cases originally to executives and key salaried employees only, to cover now all wage-earners who meet certain minimum requirements, accrued income of pension funds is likely to become imputable increasingly to the middle and lower income groups. (The problem of accrued property income applies to private pension funds only, since investment income of social security reserve funds is not part of personal income.)

Deferred income is of even greater and increasing importance in the labor component of personal income where it appears in the form of employer contributions to private pension funds and for group insurance. In addition, employer contributions to health and welfare plans constitute a significant and relatively new component of labor income in kind. These two types of imputed labor income have increased from 156 million in 1939 to nearly 3.5 billion dollars in 1952. Together with employee contributions to social insurance funds, which are excluded altogether from personal income, they now exceed the monetary interest and the monetary rent components of personal income.

Historically, income in kind (such as food and lodgings supplied domestic help and other service employees and food produced and consumed on farms) constituted a category of personal income imputable largely to the lower income groups. Since the beginning of World War II, however, high personal income taxes, combined with high corporate profits taxes, have created a situation where compensation in kind became more profitable to the corporate executive and key employee and less onerous to the corporation. Arrangements under which housing,

entertainment, and vacation expenditures of executives are carried as business costs and overgenerous expense accounts are some of the techniques used; option arrangements for executives to purchase their corporation's securities below market price are another. The difference between the market and the option price is clearly a form of compensation for services rather than a capital gain and should be treated as such.

If our tax structure continues roughly in its present form and individual income tax rates remain high and sharply progressive, the importance of these types of income in kind is likely to increase. Even though our national income accounts make no attempt to allocate such compensation in kind to personal income (and federal tax authorities have not yet found a practical way of taxing much of it), a realistic appraisal of changes in personal income distribution cannot fail to take it into account.

Pension plans and various arrangements to postpone part of the executive compensation until after the retirement age, which have been developed in recent years mainly because of tax considerations, tend, in effect, to spread such compensation over the life span of the recipient. Any averaging of income over time tends to reduce relative income dispersion. As personal income distributions move increasingly from the "when earned" to the "when disbursed" basis, the question might be raised to what extent the drift toward equality, which size distributions for this country show unmistakably, represents changes in the timing of the compensation for services currently rendered rather than changes in the earning capacity of factors of production.

Basic data to appraise the importance of the changing composition of income in kind, the significance of income payments disguised as business expense, and the impact of deferment of income are extremely scanty, and I am not in a position at this time to present even tentative estimates. The extent to which these factors affect the ranking of income recipients depends obviously not on their relative size but on whether or not the distribution of income not included in any given income distribution is different from that of the income covered. Even though in recent years about one-third of total property income was received not as monetary payments but either in kind or as an accrued item, its imputation would affect income-size distributions only if its size pattern of distribution were different from that of all types of money income combined.

It is likely that imputation of some types of compensation in kind will make size distributions more equal than those based on money income alone, while others will pull in the opposite direction. The new OBE distributions referred to earlier do not provide a definite answer to our problem since they impute only income (except employer con-

tributions to private pension funds) covered by the official definition of personal income. Lorenz curves which I have derived from these distributions for total personal income and money personal income alone show that the former was more equally distributed in 1947 and 1950 (the last year shown) than the latter. The shift toward the line of equal distribution is particularly noticeable for the lower income groups; this was equally true for 1947. It is reasonable to believe, however, that those items which the OBE disregards as falling outside its definition of personal income would affect the size distribution of personal income in the opposite direction, since most of them represent conversion of income into tax-exempt or tax-favored forms for the benefit of individuals in the higher income brackets. (Allowance for these items might also modify Creamer's conclusion that the relative share of executive compensation has been declining.) Moreover, the imputation of income in kind and of various accrued items rests on foundations considerably less solid than the distribution of money income and the results obtained depend largely on the assumptions made.

Maybe we should also note, be it only in passing, the opportunities open to holders of assets to reduce their tax liabilities by transferring income-yielding assets to a trust fund established in favor of children or relatives. There is, indeed, some evidence of a wider use of personal trusts for avoiding the high marginal personal income rates. While we have no separate data for property held in trust and estates under administration, the total number of both types of fiduciary returns with an annual net income of $100 and over has increased more than 60 per cent between 1939 and 1945 and has continued to increase since the end of the war. Only a very small part of this increase can be attributed to the lowering of the filing requirements from $5,000 to $500 of gross income.

Butters, Thompson, and Bollinger have found in their study on the *Effects of Taxation on Investment by Individuals* that 47 per cent of individuals in their "active investor sample" earning $100,000 or more were beneficiaries of trusts, 50 per cent had established living trusts, and 29 per cent had established testamentary trusts or planned to create trusts. The nonduplicating total for all types of trust was 69 per cent and it was as high as 41 per cent for considerably less prosperous individuals earning between $12,500 and $24,999 in 1948. A classification of the same sample by wealth groups shows a corresponding picture, the nonduplicating total for the top group whose wealth exceeded 1 million dollars being 73 per cent.

Admittedly, final judgment on the quantitative effects of these various factors must be reserved until at least rough estimates for adjustment purposes become available. I have, perhaps, devoted too much time to the possible biases resulting from the limitation of available size dis-

tributions to the official definitions of personal or taxable income, but it seems to me that at times preoccupation with continuity and comparability of time series makes us slaves of available statistics and blurs our vision. While there is sometimes a tendency to disregard such minor components of income which cannot be easily quantified on the grounds that they are unlikely to change the broad picture, this might prove dangerous when dealing with relatively recent tendencies which are likely to become of increasing importance. I feel that recent trends in collective bargaining and the increased interest in tax aspects of compensation constitute important new developments which cannot be ignored when appraising changes in income-size distributions. Neither can be the opportunities available to asset holders in inflationary periods to transform, at a minimum risk, property income into capital gains.

Indeed, from the point of view of the investor, the amount of income retained after applicable taxes is one of the factors determining the composition of his portfolio and therefore the sources of his property income. As long as capital gains are taxed at a rate lower than the marginal rate on his income, he will try to convert part of his property income into capital gains. When the price level has been rising over a relatively long time and a sharp and sustained reversal of this movement is not generally expected, there is no reason why the average income recipient in the upper brackets should not be successful in this endeavor. There are good reasons to believe that given a choice between a wide range of securities, including stocks of companies pursuing a policy of systematically plowing back a very substantial part of their profits, and fortified by the professional advice of investment counsels and tax lawyers, he has taken, during and in particular since the war, full advantage of the opportunities open to him. Kuznets' estimates (*op. cit.,* Table 118) show that the loss between 1939 and 1946 (the last year for which this comparison is possible) in the share of the upper 1 per cent in personal income is nearly halved (reduced from 2.82 to 1.60 percentage points) when the excess of *realized* gains over losses from the sale of assets alone is taken into account. For the upper 5 percentage band, the decline is reduced by one-third (from 5.25 to 3.63 percentage points).

A similar argument applies to interest, where the yield after taxes influences the investor's choice between municipal, federal government, and corporate securities. I doubt that anyone familiar with the market for tax-exempt securities since the wartime rise in personal tax rates would consider the decline of the share of the upper 1 per cent in total interest payments from more than 24 in 1939 to less than 16 per cent in 1948 equivalent to a decline of a corresponding magnitude in any other type of income. By shifting into tax-exempt securities, the taxpayer in

the upper income brackets has been able to retain a higher percentage of income received than was retainable from other types of property income. Even though the top 1 per cent received in 1939 more than 10 and in 1948 less than 5 per cent of their income in the form of interest, the share of interest income adjusted for tax equivalence might have declined considerably less. (For a comprehensive discussion of this and some related points, see J. Keith Butters, Lawrence E. Thompson, and Lynn L. Bollinger, *Effects of Taxation on Investments by Individuals.*) I note in passing that according to Kuznets the decline in interest accounts for half of the decline in the share of property income in total income (basic variant) of this upper income band.

I conclude that an analysis of changes in the share of the upper income groups in a period of rising equity prices and tax rates will remain somewhat unrealistic unless adjusted for tax equivalence of income received, for the shift from property income into capital gains, and for service income received in the form of nontaxable business expenses. And, until we are in a position to quantify, even roughly, the adjustments required, sweeping generalizations about changes in the shares of the upper income groups should not be drawn from Kuznets' meticulous and careful study, replete with warnings about various types of limitations of data presented and guarded in its conclusions.

## II

But what sort of inequality is reflected by a size distribution of personal income, even after all imputed and accrued items are properly allocated? And what analytical needs are met by such size distributions?

Size distributions of personal income among consumer or family units are a very unsatisfactory tool for analyzing the underlying causes of changes in the productive earning capacity. Any inferences about changes in the degree of equality in contemporary society drawn from changes in distributions of personal income lack analytical precision, mainly because they do not distinguish between earnings from participation in current economic activity and the effects of redistribution but also because they involve a certain amount of averaging of incomes over time. On the other hand, to the extent that they are used primarily as a tool for analyzing the dynamics of consumer demand, distributions of personal income unnecessarily depart from the concept of purchasing power currently distributed to consumers.

Indeed, four broad long-run forces seem to be of greatest importance in shaping changes in the size pattern of the flow of income to individuals: the trend toward a reduction of wage differentials, the trend toward a wider distribution of property ownership, the trend toward averaging over time of the income stream to individuals, and the increasing importance of redistribution through government.

These trends affect the distribution of personal income by size in both directions. While any movement toward an equalization of property income (including its channeling into pension funds from which the individual at some future date will receive transfer payments roughly in proportion to his past earnings) and of labor income trends to increase the share of the middle income groups, the increased number of recipients of transfer income adds to the weight of the lower brackets. Improved social insurance benefits and private pension plans make it possible for an increasing number of retired people to maintain separate households. More people out of jobs or going through a readjustment process because of illness or of a breakup of family can manage without going to live with relatives. While the greater availability of transfer income improves the economic position of these individuals, as well as of their relatives, statistically it tends to increase the degree of inequality shown by size distributions of personal income.

Unless size distributions are obtained that distinguish between what has been called primary distribution and redistribution of income, partly offsetting movements will reduce the magnitude of over-all changes over time and obscure the real significance of the underlying developments. Even granting that at least part of each type of income paid out could be considered as a transfer rather than as income arising from economic activity during a given production period (as argued, for instance, by S. Kuznets, *op. cit.*, page 5), the distinction between the uncertain timing of the flow of income to the factors of production on the one hand and the redistribution of income among persons and over time on the other seems sufficiently clear.

The implied argument for eliminating all accrued items from distributions of consumer income is, indeed, that, to be of analytical value for studies of consumer behavior, the concept of income used should be one which corresponds as closely as possible to what the average consumer considers to be his income rather than a concept which fits neatly into a system of social accounts. Needless to say, the consumer concept of income should be reconciled with the national income series.

Size distributions of consumer income currently received would involve a minimum of imputation problems (obviously, income in kind received currently should be imputed since it obviates the need for certain money expenditures). To include in such distributions all types of transfer income, it will be necessary in such distributions to treat private pension plans explicitly in the same way as government social security programs are now treated in OBE estimates. There are also valid arguments for including in size distributions of consumer income—in particular, disponsable income—realized net capital gains, which, in part, represent realization of the individuals' share in undistributed profits.

For an analysis of the effects of long-run shifts in the market strength of the various factors of production and their inputs we need a distribution encompassing all types of compensation for participation in economic activity, whether currently distributed or not. From what I said before, it should be clear that I favor inclusion in such a distribution of a number of items not now covered by our national income concept. Since we are far from a meeting of minds on the incidence on corporate income taxes, I see no alternative than presenting such a distribution on two bases, including and excluding such taxes. I am not overlooking the difficulties of imputing corporate dissaving, but I believe that as long as our interest runs in terms of long-run shifts, comparisons for selected years—for instance, for years of reasonably full employment—will be illuminating. It seems to me that when during a decade nearly two-thirds of corporate earnings have not been currently distributed, an analysis of changes in income inequality which disregards corporate savings becomes somewhat unrealistic.[6] Corporate profits and income of unincorporated business should be included before any inventory valuation adjustments since we are interested in earnings of property from economic activity in a broader sense and not only from current production. I also agree with Burkhead that government interest should also be included since, from the point of view of property owners, investment in government securities presents an alternative to holdings of private securities and other assets. (Compare Burkhead, *op. cit.*, page 197.)

Looking into the future, I venture to guess that the need for size distribution of primary income will be felt increasingly. I do not minimize the conceptual difficulties involved in the proposed distribution, notably the treatment of corporate profits taxes, but I believe that it would represent a substantial progress toward our understanding of forces making for changes in income inequality. (Whether or not changes in size distribution of primary income or of some variant of this concept will prove to be as striking as those of personal income, I am not in a position to say. If so, findings based on changes in factor earnings would

[6] Yet some rough calculations made by Kuznets (*op. cit.*, Table 11) for the upper 5 per cent suggest that imputation of corporate savings to personal income has a rather moderate effect on recent changes in the share of the upper group. While his computations show, for instance, that the decline of more than one-third (36 per cent) in the share of the top 1 per cent between 1939 and 1946 is reduced to less than one-fourth (23 per cent) by the inclusion of undistributed profits, some unknown part of this decline is fictitious. Indeed, Kuznets' estimates apply to a disposable income variant which adds net capital gains to personal income. The amount of the resulting duplication involved (since net capital gains in part reflect realization of undistributed profits) could not be determined. Under the extreme, and altogether unrealistic, assumption of complete duplication, the decline in the share of the upper 1 per cent would be reduced, by inclusion of undistributed corporate profits, by only 4 percentage points; for the top 5 per cent as a whole, this adjustment appears to have hardly any effect. However, Kuznets' adjustment has certain limitations which suggest that the inclusion of undistributed profits might have a more significant influence on income-size distribution than suggested by Kuznets' table.

be more revealing than an analysis which fails to distinguish between the primary distribution and redistribution.)

The interpretation of income-size distributions depends, moreover, not only on the scope of the income concept, but also on the recipient unit. While the family or some other variant of the unit of consumption is most useful for appraising the effects of changes in the current accrual of purchasing power, a different unit of distribution is required when the focus is on productive earning capacity. Perhaps a distribution among all members of the labor force, widened to include recipients of property income only (perhaps in excess of some small minimum amount) would prove to have the greatest analytical potential. A distribution of income by size which ignores the zero earner who is willing and able to participate in economic activity loses much of its value for an analysis of inequalities arising from the functional distribution of income, while in the distribution of spendable income there is little reason to segregate the zero earner, even when he is a member of the labor force, from the family unit to which he belongs.

Perhaps, in line with recent emphasis in studies of type distribution, size distributions of income arising from current economic activity should be limited to what Denison calls the ordinary business sector. Indeed, traditional distribution theory is applicable to this sector only. The effect of government employment and of imputed income from home ownership on the reranking of recipient units can be more meaningfully analyzed after a size distribution of income arising in the enterprise sector is obtained.

As Kuznets has forcefully stated, "the essence of the matter is not inequality, but what it stands for." Over-all distributions are, perhaps, too conducive to generalizations on over-all trends, while actually changes in size distributions, which graphically appear as a gentle drift toward the Lorenzian line of equality, are in reality the result of complex developments. The more that separate distributions for relatively homogeneous segments of the economy can be constructed, the more our knowledge of the nature of the drift toward equality is likely to increase. Indeed, the extent to which the move toward statistical equality can progress within a given industry is limited because of labor force turnover and of similar influences which will always account for a residual of inequality and because of the need to preserve incentives. But to the extent that inequality of income distribution reflects differences in productivity among industries, any decline in the importance of a less efficient sector or an increase in its productivity will result in greater equality within the aggregate. The effect of the relative rise of the average income in farming and of the declining share of agriculture in income produced is an obvious example.

A more detailed study of the nature of changes in income distribution

over the entire range of incomes and within specific segments of the economy will, perhaps, give us also a more balanced view of what has been called the revolutionary character of recent changes in income distribution. It is reasonable to expect that further research will substantiate the conclusions of Geoffrey Moore that the end of the twenties marked a turning point in the structure of income distribution, since this period marked the turning point in many other aspects of our economic (and not only economic) life. However, between 1929 and 1939 per capita income of the 2nd to 5th percentage band declined only one-fourth more than that of the remaining 95 per cent of the population, while a much sharper drop affected the upper 1 per cent. By contrast, differences between the group just below the top (the 2 to 5 percentage band) and the lower 95 per cent were striking between 1939 and 1948 when the percentage gain in the per capita income for the former was considerably less than half as large as for the latter (see G. H. Moore, *op. cit.,* Table 1).[7] Moreover, between those two years, gains made by the upper 1 per cent and the next 4 per cent were very similar (78 against 86 per cent).

I am inclined to consider the change in the respective shares of the upper 1 and the remaining 99 per cent between 1929 and 1939 more as a reaction to the rapid increase in the share of the upper group during the twenties, when per capita income of the lower income group and its share in total income declined, than as part of a continuous movement toward greater equality since the end of the twenties.

The great stability in income-size distribution and in the share of labor in total income since the end of the war raises several questions as to the nature of the changes depicted in Kuznets' analysis. To what extent are comparisons of 1948 with 1939 indicative of long-run trends and to what extent of cyclical and miscellaneous nonrecurrent developments? In considering the significance of changes in income distribution since 1939 one of the main problems is to assign the proper weights to the effects of a shift from an underemployment economy to the subsequent conditions of substantially full employment on the one hand and to the more basic changes reflecting long-run trends on the other. Changes in income-size distribution which reflect the attainment and maintaining of high levels of employment are, I am afraid, somewhat more reversible than those which reflect long-run changes in the structure of wages and salaries, including the persistent reduction of occupational and regional differentials, the geographic redistribution of popu-

[7] Even though the decline in the share of the upper income bands can be traced only in small part to their diminishing share in the rising labor income (since this type of income contributes relatively little to their total income), the share of the upper 5 per cent in the labor income of the nonfarm population dropped between 1939 and 1948 by one-third (from 15.7 to 9.8 per cent), while it actually increased between 1929 and 1939 and fluctuated but little between those two years.

lation, the mechanization of our agriculture (and the modernization and diversification of its southern segment), and some other developments. Also, that part of the movement toward greater equality since 1929 which can be traced to the decline in interest rates and the related drop in rents can hardly be extrapolated. There is some evidence of a more equal distributing of wealth, but our knowledge in this field is so limited that definitive conclusions cannot be drawn. It is in the study of the structural changes of our economy that we are likely to find significant clues as to what constitutes the more long-run changes in income-size distribution. Indeed, our understanding of the meaning of changes in the degree of income equality cannot be greater than our understanding of the underlying changes in our economy.

Changes in the respective shares of the small upper group and the remaining 93, 95, or 99 per cent of the population are, of course, only one aspect of the dynamics of our income structure. Changes within the broad lower group, for which limitations of statistical data until very recent years severely curtail the detail to which analysis can be pushed, may or may not have been as drastic as suggested by Kuznets' study of the share of the upper income groups. Possibly, however, the broad economic and social consequences of shifts in relative income positions within the lower 95 per cent of the population since 1929 or 1939 are as important as the decline of the share of the upper layer on which so much of the discussions since the publication of Kuznets' investigations has been focused. And, perhaps, the rise of the mean real income and the elimination of mass unemployment had a deeper effect on our recent economic past than changes in the relative share of the upper income group.

Indeed, some of the other aspects of our income structure have attracted less attention than the dramatic decline of the relative share of the upper 1 per cent. Yet Kuznets, on whose estimates the various judgments about the significance of the decline of the share of the upper group rest, places considerable emphasis on these aspects while stressing that all statistical measures of inequality depend on the scope of the concept and the unit of distribution used.

Among these aspects, the significance of the relationship between the level of income and its distribution is lost when distributions are compared exclusively in terms of specific percentage bands. In periods of rising real income, greater equality is compatible with an increase in real incomes even for the income ranges whose share in total income is declining. Thus, in 1950 the mean income of the top 5 per cent of families was $19,545 against only $17,180 (in 1950 dollars) in 1935-36 (S. Goldsmith, G. Jaszi, H. Kaitz, and M. Liebenberg, "Size Distribution of Income Since the Mid-Thirties," to be published in the *Review*

*of Economic Statitstics,* February, 1954, Table 5). Or, to put it in another way, in spite of the sharp decline in the share of the upper strata of the population which account for the bulk of savings, the personal savings ratio is now higher than in 1929.

A further aspect is income status over a period in contrast to income incidence during a given year, an issue to which recent theoretical and empirical work in the field of consumption theory lends additional importance. Another is mobility within the income scale. Here, again, Kuznets has offered some very suggestive analysis limited to samples drawn from the upper strata. Perhaps a good deal of mobility within the income scale, and in particular within its middle range, and the relatively large turnover on both of its ends are among the most important characteristics which distinguish the American variety of capitalism from its older European variant and the semicolonial and semifeudal Latin-American and Far Eastern counterparts.

Although there are still considerable gaps in our knowledge of the dynamics of income-size distributions and of their relation to type distributions and to the underlying changes in our economy, several recent investigations, including the studies referred to in this paper, have added importantly to it. The general contours of developments over pretty extended periods of time are sufficiently clear, but the long-run significance of the changes in the size distribution observed and of the relative stability in the type distribution are in need of further detailed analysis. One field into which no doubt it will be pushed is the structure of specific types of income, of which labor income is not only the most important but also one for which a wealth of statistical material is accumulating rapidly. (See W. S. Woytinsky, *Employment and Wages in the United States,* and the literature quoted therein.)

Finally, it should be noted that studies on income-size distributions in foreign countries seem to indicate that the trend toward greater equality manifests itself in such diverse economies as Great Britain and Brazil. There is some evidence that developmen's observed in this country are part of a wider trend, one of the aspects of which is, perhaps, a reduction in the dispersion of average income levels throughout the world. But I am bordering here on a complex of problems which is clearly beyond the subject of my paper.

# INCOME TYPES AND THE SIZE DISTRIBUTION

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That income patterns are broadly stable over long periods has been suggested repeatedly in economic literature. The observation has been applied both to the distribution of income by type and to the distribution of income among recipient units classified by the size of their total income.

In this paper I shall reaffirm that in an important sense the stability of the distribution of national income by type has indeed been maintained in quite striking degree, aside from cyclical movements. However, it is important to understand the sense in which this is so, and much of the paper is directed to this end.

The distribution of income by size has been illuminated by two recent studies: Professor Simon Kuznets' well-known *Shares of Upper Income Groups* (National Bureau of Economic Research, 1953) and the Office of Business Economics' *Income Distribution* supplement to the *Survey of Current Business*. Selma Goldsmith, George Jaszi, Hyman Kaitz, and Maurice Liebenberg, who prepared the latter report, have also unofficially adjusted prewar income distributions to place them, as nearly as may be, on a comparable basis with the official Office of Business Economics data for more recent years. Their results, which will soon appear in the *Review of Economics and Statistics,* agree with those of Kuznets in suggesting a sharp decline in the share of the top 5 per cent of consumer units: they indicate a reduction from about 30 per cent in 1929 to 20.4 per cent in 1950. In addition, they show that the lessening of relative income differences, at least from the mid-thirties and 1941 to the postwar period, was not confined to a reduction in the share of income received at the top but broadly pervaded the income distribution. That is, percentage increases in income were progressively larger in successively lower segments of the income distribution. However, they find that about two-thirds of the total shift in the Lorenz curve from 1935-36 to 1950 resulted from the shift in relative income shares from the top 5 per cent to the lower 95 per cent. The OBE data show the new pattern to have been substantially stable from 1944 through 1950.

These investigators as well as Kuznets find that the move toward less dispersion in the size distribution of income has resulted in part from a relative reduction in the sources of income which are of disproportion-

ate importance to upper income groups. Kuznets, with certain cautions which cannot be repeated here, found for his basic income variant that about one-third of the reduction in the share of the top 5 per cent from 1939 to 1948 could be ascribed to shifts in the importance of different income sources. A comparison of 1929 and 1948, based on his data, gives a similar result: the effect of changes in the importance of different income types was just about half that of changes in the top 5 per cent group's share of individual income types.

The distribution of income by types is thus found in one context to contribute importantly to a very marked lessening of relative income differences while in another it can be viewed as substantially stable in the long run. This is due to the use of different income concepts and to consideration of separate sectors of the economy as against treatment of the economy as a whole. I shall try later to indicate the significance of these differences.

Segregation of cyclical from long-term influences affecting income distributions is imperative for useful analysis, since both type and size distributions are much affected by business fluctuations.

Time limitations forbid adequate discussion of both cyclical variations and longer-term changes in income composition, and I shall concentrate upon the latter. Accordingly, in examining the statistical evidence of changes in income composition I shall confine my presentation to reasonably comparable years: those of high-level activity except in World War II and the reconversion period. The requisite detailed data by type of income are available only since 1929, so that this restriction leaves only seven years: 1929, 1941, and the five years from 1948 through 1952.

Where possible, I shall compare 1929 with the 1948-52 average as a rough measure of trend. In addition, it seems desirable to use 1941 as the most appropriate intermediate reference point, even though it was a year of still-considerable unemployment along with sharply rising activity.[1]

## I

The distribution of the national income by type of income may be examined first. This distribution is intended to measure the form in which income earned in current production is initially distributed in the market place, before it is altered by government action in the fields of taxation or the payment of transfer incomes. In examining the record

[1] Close examination of detailed data for omitted years lends support to certain generalizations made in this paper concerning the longer term stability in the type composition of income, but the analysis is complicated and requires some qualitative judgment concerning the special influences which were operative. Reference may be made, however, to charts covering the omitted years in my article, "Distribution of National Income," *Survey of Current Business,* June, 1952, pp. 16-23. Portions of this paper represent an extension of analysis in that article, which also covers some technical points omitted here.

it is enlightening to look separately at relatively homogeneous sectors of the economy, and then to combine them to obtain the distribution of the total national income.

It is only in corporations, proprietorships, and partnerships organized for profit that it is really possible to speak of a division of total income by type. About four-fifths of the total national income arose in such organizations in each of the years under consideration: 78 per cent in 1929 and an average of 81 per cent in the five most recent years.

A long step toward securing homogeneous sectors for analysis is attained simply by dividing this ordinary business portion of the economy into three broad parts which differ greatly in their income distributions. In nonfarm corporations, the compensation of employees in prosperous years is typically three-fourths of total income originating. In nonfarm proprietorships and partnerships it is one-half and in agriculture it is only one-sixth.

These wide differences reflect primarily the proportion of labor input contributed by paid employees as distinguished from the unpaid work of firm members and family workers. Whether this is the entire explanation of the differences cannot, in the nature of the case, be firmly established, for it is not possible to determine directly the proportion of the income of unincorporated enterprises which represents a return for labor input. Indeed, the best way to approach that question may be to assume that the total return for labor, including the labor of employees, owners, and family workers, comprises the same proportion (about three-fourths) of total income originating in unincorporated firms as it does in corporations, where the problem is minimal.

Such an assumption, it may be noted, would imply in 1952 an average labor return to proprietors of nonfarm unincorporated businesses about two-thirds as high as the average compensation of paid employees in the business economy as a whole. It would also imply that in the aggregate little more than half of nonfarm proprietors' income represents a return for labor. If these ratios should seem low, it is well to remember that most nonfarm proprietors are in firms whose total net income per proprietor is much below average employee earnings, and that the bulk of total proprietors' income is accounted for by the larger firms, where property income may predominate.

In each of the three sectors of ordinary business the proportion of total income represented by employee compensation has been substantially stable in prosperous peacetime years. The data are shown in Table 1. (The "entire economy" and "all other sectors" lines in Table 1 are discussed later.)

In nonfarm corporations, this proportion was 74.1 per cent in 1929 and averaged 74.2 per cent in the five postwar years, so that there was

no trend at all in evidence. The range in the seven individual years under consideration was only from 72.6 per cent in 1941 to 75.3 per cent in 1949, or 2.7 percentage points. The terminal year, 1952, was near the top of this narrow range as profits were impaired by the mid-year steel strike more, proportionately, than were pay rolls.

TABLE 1

COMPENSATION OF EMPLOYEES AS A PERCENTAGE OF NATIONAL INCOME, BY SECTORS, SELECTED YEARS

| SECTOR | 1929 | 1941 | 1948 | 1949 | 1950 | 1951 | 1952 | AVERAGE 1948–52 |
|---|---|---|---|---|---|---|---|---|
| Entire economy | 58.1 | 61.9 | 62.7 | 64.7 | 63.8 | 64.3 | 66.3 | 64.3 |
| Ordinary business: | | | | | | | | |
| Nonfarm corporations | 74.1 | 72.6 | 74.2 | 75.3 | 73.3 | 72.9 | 75.2 | 74.2 |
| Nonfarm proprietorships and partnerships | 48.4 | 47.1 | 49.0 | 49.4 | 49.5 | 50.3 | 51.9 | 50.0 |
| Farms | 16.5 | 13.9 | 14.4 | 17.8 | 16.4 | 15.4 | 16.1 | 16.0 |
| All other sectors | 45.2 | 65.9 | 68.9 | 69.7 | 68.5 | 71.0 | 71.4 | 69.9 |

In nonfarm proprietorships and partnerships, the compensation of employees represented 48.4 per cent of total income in 1929 and an average of 50 per cent in the five most recent years. This change is too small to be considered significant, particularly if deficiencies in the basic data for this sector are kept in mind. For individual years the range is from 47.1 per cent in 1941 to 51.9 per cent in 1952, according to the preliminary estimate for that year.

On farms, compensation of employees was 16.5 per cent of income in 1929 and averaged 16.0 per cent from 1948 to 1952. Thus in farming, too, there is no significant long-term trend in the percentage. The variation among the seven individual years was from 13.9 per cent in 1941 to 17.8 per cent in 1949. This percentage is not strongly associated with the level of farm income but is influenced by the direction of movement, tending to be high when farm income is falling and low when it is rising. It is this factor which largely explains the year-to-year fluctuations.

The behavior of these percentages provides major evidence of the long-run stability in the employee share of income within reasonably homogeneous sectors of the economy. However, since there is substantial variation among industries in the usual distribution of income, there remains this question: may there not have been underlying changes in the income distribution that were offset and masked by changes in industrial composition? We can answer this by isolating the effect of shifts in the distribution of income within individual industries upon the distribution for ordinary business as a whole from the effect of shifts in the relative importance of the industries.

For comparisons of two years, the procedure requires multiplication

of the industry weights of one year by the share distributions within each industry of the other year. Within individual industries the corporate-noncorporate proportions have differed little among the years with which we are concerned, although this is not true for the all-industry aggregate. Hence the method effectively isolates changes in homogeneous segments of the business economy from changes resulting either from shifts in industry weights or in the relative importance of corporate and noncorporate firms. The procedure followed was to compare 1929 with each of the other six years, averaging the results obtained by the use of 1929 and of given-year weights. The resulting breakdown of changes in the employee share, in percentage points, is as follows:

| Year | Actual Change from 1929 | Change Due to Shifts in Industry Weights | Change Due to Share Shifts within Industries |
|---|---|---|---|
| 1941 | −0.8 | 0.8 | −1.6 |
| 1948 | −0.4 | 0.4 | −0.8 |
| 1949 | 1.7 | 1.2 | 0.5 |
| 1950 | 0.8 | 1.6 | −0.8 |
| 1951 | 0.8 | 1.8 | −1.0 |
| 1952 | 3.1 | 2.3 | 0.8 |
| Average 1948–52 | 1.2 | 1.5 | −0.3 |

For ordinary business as a whole, employee compensation comprised 61.7 per cent of national income in 1929. Had the industrial composition of the total been the same in 1929 and 1941, differences in the share distribution within individual industries would have placed the employee share in 1941, 1.6 percentage points below 1929. The share would have been 1 percentage point or less below 1929 in 1948, 1950, and 1951, and less than 1 percentage point above 1929 in 1949 and 1952. The smallness of these differences and the absence of any trend in them provide striking confirmation of the stability of the labor share when structural changes in the economy are abstracted from. It may be noted that this does not indicate that no important changes have occurred in individual industries; they have. It does indicate that such changes have varied in direction and, on balance, been offsetting.

The industrial composition of income within the ordinary business sector operated to raise the employee percentage in the postwar years above 1929, and increasingly so from 1948 through 1952. The influence of this shifting industry composition was already substantially eliminated when we dealt separately with nonfarm corporations, nonfarm proprietorships and partnerships, and farms.

One other type of structural change could in principle be important, especially for unincorporated firms, in altering the distribution of

income by type. This is the composition of firms by size of business.

Some years ago I analyzed, on the basis of data for 1939, certain relationships by size-of-receipts classes for sole proprietorships in several of the service industries. A general pattern emerged which in each industry showed the ratio of pay rolls plus net income to receipts to be virtually the same for all receipts-size classes with the possible exception of the very smallest. However, the proportion consisting of pay roll increased sharply as the size of firm increased, while that of profit showed a commensurate decline. For example, in barber shops and beauty parlors, profits plus pay rolls equaled 64 per cent of receipts. For firms with receipts of $5,000 this 64 per cent consisted of 34 per cent pay roll and 30 per cent profit. But at $12,000 it was 44 per cent pay roll and 20 per cent profit and by $40,000, pay roll was 53 per cent and profit 11 per cent. At the extremes of the distribution the divergence was still more pronounced. This pattern suggests that the only important influence at work may have been the division of labor between paid employees, on the one hand, and proprietors and unpaid family workers on the other.

Data gaps and deficiencies limit the extension of such analysis, but it is clear that the pattern of inverse relationship between size of unincorporated firm and profit ratio appears in virtually all industries. Also to be noted is that profit ratios are higher and pay roll ratios lower for partnerships than for sole proprietorships in similar receipts classes. Hence any pronounced change in the size composition of noncorporate firms, or in their division as between sole proprietorships and partnerships, could alter the ratio of employee compensation to total income by changing the proportion of total labor input which is supplied by paid labor. Whether any such change has occurred since 1929 and whether adjustment for it would increase or reduce variations in the employee share has not been and probably cannot be determined.

With this one qualification, we may take as established for the 1929-52 period the substantial stability in prosperous peacetime years of the employee share of income in the ordinary business sector, when account is taken of structural changes in the composition of that sector.

## II

The remainder of the income originating in ordinary business is divided between business earnings and net interest. Since the shares of business earnings and interest combined are simply the difference between 100 per cent and the employee share, it necessarily follows that the stability observed in the employee share applies also to these shares in combination.

In the unincorporated nonfarm sector, net interest has been un-

important throughout the period so that nothing further need be said about business net income. In farming and in the corporate sector, on the other hand, the relative size of interest payments has dwindled since 1929, while the share of business income has increased.

In farming, net interest amounted to 10.6 per cent of total income in 1929 but averaged only 2.7 per cent from 1948 to 1952—although it was rising somewhat during these years. Farm proprietors' net income increased correspondingly, from 72.9 per cent to 81.2 per cent.

In nonfarm corporations, net interest dropped from 3.6 per cent of total income in 1929 to 0.4 per cent in the 1948-52 period. Corporate earnings, which are measured before tax and inclusive of the inventory valuation adjustment, increased by practically the same amount: from 22.3 per cent to 25.4 per cent.

For interest to have maintained its former proportion, it would have been necessary for both the interest rate and the ratio of debt to income to have remained constant unless there were offsetting changes in the two determinants. Actually both declined substantially, but the drop in the debt-income ratio was much the more important factor in both the agricultural and corporate sectors. For the economy as a whole it was about twice as important from 1929 to 1950 as the drop in the interest rate.

Can any theoretical reason be provided for the offset to a smaller interest share appearing in business net income rather than being divided proportionately between employee compensation and business net income? This requires us at least to touch upon the more basic query: why should we expect—or how do we explain—long-term stability in the type distribution of income?

The theoretical basis for long-term stability in the relationship between labor and property income (when the influence of industrial and legal form changes in the structure of the economy is eliminated) might be the supposition that in the business sector there has been no important change in the relative input of labor and property resources and no change in production technique of a character which would affect the relative demand for them. Alternatively, the elasticity of demand for labor and property resource in terms of one another may be approximately unity over the range in which changes in their proportions have occurred, so that the relative size of their total return would not change even if their relative supply were altered. Perhaps the most reasonable case can be based upon a combination of the two assumptions: that the input proportions and production requirements have not changed greatly, so that the relevant range of the second assumption is not very broad; and that the elasticity of substitution over this range does not depart much from unity.

If one thus thinks in terms of returns for real inputs of labor and property resources, the view may be taken that interest payments are essentially transfers within the total property income share (as suggested by Earl Rolfe in the *Quarterly Journal of Economics* for May, 1948). This would imply that any change in interest payments, whether because of lower interest rates or less debt, would be expected to be offset in profits.

It is important to note, however, that this approach denies to the interest rate any role as a price of securing real capital resources. For if it exercises such a role, lower interest rates would tend to reduce not only interest payments on borrowed funds but also the implicit interest return on capital supplied by owners, which is included in business earnings. Hence, unless the quantity of equity and borrowed capital increased enough relative to the quantity of labor to provide a full offset in the aggregate income flows, both property income shares would tend to decline.

Another approach might be to think of interest as a payment to "outsiders" from the standpoint of participants in the firm's operations, similar to payments for raw materials. If the price (interest rate) goes down, the saving might be expected to be divided between labor and property interests within the firm, or else offset by lower product prices, without in either case affecting the relative size of employee compensation and profits. But we have seen that the more important reason for the drop in the interest share has been the decline in the debt-income ratio rather than the interest rate. If this implies, also, as it evidently does, a drop in the ratio of debt to the current value of business assets, so that on a current-price basis there has been a shift from debt to equity capitalization, this approach suggests that most, though unlike the first approach not all, of the offset to a lower interest share would appear in business income. The observed pattern of change in the income data can hardly be pushed so far as to indicate support for one rather than the other of the two approaches.

The way the corporate income tax is viewed is of even greater importance to an interpretation of developments in the distribution of income in the last two and a half decades. The data utilized so far measure income before the deduction of this tax, implying that it is a direct tax resting on corporate earnings. The conclusion that within broadly homogeneous sectors of the economy the division of income between labor and property shares is stable was drawn from these data. The two positions are thus mutually interdependent: only if the corporate profits tax is included in income can the share distribution be viewed as stable; and the stability of the share distribution so measured, in the face of radical long-term and short-term changes in

TABLE 2

CORPORATE PROFITS AND INTEREST AS A PERCENTAGE OF CORPORATE NATIONAL INCOME, SEVERAL VARIANTS

| INCOME TYPE | 1929 | 1941 | 1948 | 1949 | 1950 | 1951 | 1952 | AVERAGE 1948–52 | CHANGE IN SHARE, 1929 TO 1948–52 | | SEVEN-YEAR AVERAGE | MEAN DEVIATION FROM SEVEN-YEAR AVERAGE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | In Percentage Points | In Per Cent | | In Percentage Points | In Per Cent |
| | A. NONFARM CORPORATE NATIONAL INCOME | | | | | | | | | | | | |
| Profits before tax, plus I.V.A.,* plus interest | 25.9 | 27.4 | 25.8 | 24.7 | 26.7 | 27.1 | 24.8 | 25.8 | −.1 | 0 | 26.1 | .9 | 3 |
| Profits before tax, plus I.V.A. | 22.3 | 25.5 | 25.4 | 24.3 | 26.3 | 26.7 | 24.4 | 25.4 | 3.1 | 14 | 25.0 | 1.3 | 5 |
| | B. NONFARM CORPORATE NATIONAL INCOME LESS CORPORATE PROFITS TAX LIABILITY | | | | | | | | | | | | |
| Profits after tax, plus I.V.A., plus interest | 23.5 | 15.7 | 16.9 | 17.1 | 15.1 | 13.9 | 13.7 | 15.3 | −8.2 | −35 | 16.6 | 2.2 | 13 |
| Profits after tax, plus I.V.A. | 19.5 | 13.4 | 16.4 | 16.6 | 14.6 | 13.4 | 13.2 | 14.8 | −4.7 | −24 | 15.3 | 1.9 | 13 |
| | C. NONFARM CORPORATE NATIONAL INCOME LESS CORPORATE PROFITS TAX LIABILITY LESS I.V.A. | | | | | | | | | | | | |
| Profits after tax, plus interest | 22.6 | 20.1 | 18.5 | 15.4 | 18.6 | 14.8 | 13.1 | 16.1 | −6.5 | −29 | 17.6 | 2.7 | 15 |
| Profits after tax | 18.9 | 17.9 | 18.0 | 14.9 | 18.1 | 14.3 | 12.6 | 15.6 | −3.3 | −18 | 16.4 | 2.1 | 13 |
| | D. ADDENDUM: TOTAL NATIONAL INCOME | | | | | | | | | | | | |
| Profits after tax | 9.6 | 9.0 | 9.3 | 7.5 | 9.4 | 7.2 | 6.4 | 8.0 | −1.6 | −17 | 8.3 | 1.1 | 13 |
| Profits after tax, plus I.V.A. | 10.2 | 6.5 | 8.4 | 9.9 | 7.4 | 6.8 | 6.0 | 7.7 | −2.5 | −25 | 7.9 | 1.4 | 17 |

* Inventory valuation adjustment.
SOURCE: Computed from data of Office of Business Economics, U. S. Department of Commerce.

effective corporate tax rates, strongly suggests that corporate taxes, for the most part at least, are not shifted. While offsetting influences can always be adduced, it is hard to see, first, why they should be closely associated with changes in corporate taxation and, second, why they should not also have affected income composition in the noncorporate sectors, where this tax is not applicable.

A comparison of the distribution of corporate national income when corporate taxes are included in corporate earnings and in total income, as in the official estimates so far reviewed, with an alternative distribution which excludes corporate taxes from corporate earnings and total income is illuminating. With taxes included, the share of profits and interest changed from 1929 to the 1948-52 average by 0.1 percentage point or by less than one-half per cent. With taxes excluded, in contrast, the share of profits and interest dropped very sharply—by 8.2 percentage points or 35 per cent. Year-to-year variations were also much greater on an after-tax basis. The mean deviation from the seven-year average was 2.2 percentage points or 13 per cent as compared with only 0.9 percentage points or 3 per cent on a before-tax basis. Even if the comparison is confined to the last five years, the after-tax deviations from the mean are much greater—an average of 1.3 percentage points or 9 per cent, as against a mean deviation from the higher before-tax share of 0.9 percentage points or 3 per cent.

Other variants of an after-tax distribution are possible: the inventory valuation adjustment can be excluded, or the comparison can be made exclusive of interest, or both adjustments can be made. However, as can be confirmed by examination of Table 2, none of these provides an after-tax distribution appreciably more stable than that just discussed, nor nearly so stable as the before-tax distribution.

My conclusion that share stability is maintained only if measurement is upon a before-tax basis is the exact opposite of that reached by Professor Kenneth Boulding in *The Organizational Revolution* (Harper and Brothers, 1953). Boulding states in part: ". . . the relative stability of profits after taxes is evidence that the corporation profits tax is in effect almost entirely shifted; the Government simply uses the corporation as a tax collector."

Boulding reaches this conclusion by comparing corporate profits after tax, exclusive of the inventory valuation adjustment and of interest, with the total national income. On this basis four different influences help to offset and mask, in a long-term comparison, the impact of corporation taxes on the after-tax profits share. These are: a larger proportion of the total national income originated in corporate business in the postwar years than in 1929; branch profits earned abroad, added to domestic profits in the total national income distribution, increased

relative to the national income; 1929 was a year of inventory losses while inventory profits were obtained in most of the postwar years; and there was a reduction in the importance of corporate debt. These are not developments which can be regarded as consequences of a shifting of the corporate income tax. Any influence of high corporate tax rates would be expected to be opposite to these changes in the case of the first and fourth developments and hardly to affect the second and third.

Even with these substantial offsets, the share of profits after tax in total national income actually averaged 1.6 percentage points, or 17 per cent, less in the 1948 to 1952 period than in 1929. In 1952 alone, when the high tax rates of the Korean period were in effect, profits after tax were only 6.4 per cent of the national income—less by one-third than in 1929. Nor does this after-tax percentage exhibit stability from year to year. In the seven prosperous years under consideration here, its average deviation from the mean was 13 per cent—four times that in the percentage I have utilized as the most appropriate measure. It should be noted that Boulding did not have available 1951 and 1952 data, which are especially adverse to the tax-shifting position—although the presence of controls might be adduced as a partial explanation of the low after-tax share. But the main point is that neither on a before-tax nor an after-tax basis can share stability be expected or found in the distribution of the total national income. For this we must look at homogeneous sectors of the economy.[2]

## III

We return now to the main thread of the discussion, which has shown that within the ordinary business sector of the economy the compensation of employees has been a stable proportion of income if we abstract from structural changes, but that there has been a shift from interest to profits.

The one-fifth of the national income which originates outside ordinary business consists of a series of income flows arising from unrelated activities. In most of these activities there is only one type of income and in almost none of them is it possible to think of a division of income between labor and property shares. The relative size of these flows has changed greatly since 1929.

The net result of these shifts was a rise from 45 per cent in 1929 to 70 per cent in the 1948-52 period in the proportion of all income originating outside the ordinary business sectors which consisted of the

[2] Additional after-tax variants based on data for the economy as a whole, all of which show a rise in the labor share rather than a stable pattern, are discussed by Jesse Burkhead in "Changes in the Functional Distribution of Income," *Journal of the American Statistical Association*, June, 1953, pp. 192-219.

compensation of employees. The offset appeared almost entirely in interest and rental income.

The type distribution of the total national income reflects the combined effects of changes in the type distribution within homogeneous sectors of the economy and of changes in the relative size of the total income flows originating in different activities, the latter being affected both by shifts in the allocation of real resources and by differential price movements.

Resultant changes in the distribution of total national income since 1929 have been marked. Comparison of the average percentage distribution in the 1948-52 period with that in 1929 shows the following changes. Compensation of employees is up by 6.2 percentage points or 11 per cent. Corporate earnings (profits before tax, including the inventory valuation adjustment) are up by 2.5 percentage points or 22 per cent. In contrast, rental income of persons is down by 3.2 percentage points or 48 per cent, and net interest by 5.2 percentage points or 70 per cent. Changes in the shares of proprietors' income were smaller. That of nonfarm business and professional proprietors was up 0.2 percentage points or 2 per cent while that of farm proprietors was down 0.5 percentage points or 9 per cent. In the case of farm income, especially, there was a wide variation in the percentage as among the individual postwar years.

A division, on almost any sensible basis, of the total national income between returns for labor and property indicates that the labor proportion has increased since 1929. If we allocate proprietors' income (including farm) between labor and property shares by the method suggested earlier of relying upon the breakdown in the corporate sector, and add the implied labor content to employee compensation, we find that the labor share increased from 68 per cent in 1929 to an average of 73 per cent in the 1948-52 period. The shift persists if the compensation of government employees is excluded, the change then being from 66 per cent to 70 per cent. Counting all or none of proprietors' income as labor income, or use of any of various alternative distributions reviewed by Burkhead, yields a similar conclusion.

## IV

We now consider how the changes in the type distribution of earnings as they are originally distributed in the market place have affected the size distribution of before-tax incomes. In doing so, it is necessary to think of before-tax corporate earnings as accruing in the first instance to stockholders, which is reasonable if I am correct in viewing the corporate profits tax as resting largely upon profits.

Kuznets finds that the upper 5 per cent of the population receives

a far higher proportion of dividends, which we may here equate with corporate earnings, than of total income or of any other share. Indeed, they received 83 per cent of all dividends in 1929 and 70 per cent in 1948. Their share in the compensation of employees, the other component of national income besides corporate earnings which has shown a strong relative increase, is, on the other hand, much less than their share of total income. The upper 5 per cent receives a larger percentage of interest and rental income, the two flows which have shown sharp relative declines, than of total income but the differential is much less than in the case of corporate earnings.

Despite the influence toward a reduction in the share of the upper 5 per cent of changes in employee compensation, interest, and rents, the weight of corporate earnings in the income of this group is so large that, had it received the same percentage of each of the six major income types in both 1929 and 1948-52, shifts in the type composition of the national income would not have lowered the proportion of the total national income accruing to the upper 5 per cent at all.[3] Thus in themselves changes in the type distribution of income as it is originally distributed in the market place did not contribute to the reduction of upper income shares which has been previously noted.

This conclusion, however, needs amplification. It is dependent upon the simple six-way classification of income types utilized. Thus the compensation of all employees is treated as a single income share. But compensation of corporate officers has declined relative to national income since 1929 while other employee compensation has increased. If the two components were treated as separate types of income and if it were to be assumed that all compensation of corporate officers is received by the upper 5 per cent, a calculation similar to that just described would indicate that the shifting composition of income by type had contributed to a slight extent—but still less than one percentage point—to the drop in the share of total income accruing to that class.

Also, the conclusion is confined to the two-way distinction between

[3] This can be confirmed by multiplying the share of this class in each type of income (using for profits the dividend percentage), as reported by Kuznets for his basic variant for either 1929 or 1948, by the percentages each type of income comprises of the Department of Commerce national income total in 1929 and in 1948-52, and summing the products. In my calculations, Kuznets' percentages were modified slightly in two respects: the rent percentage was adjusted to include imputed rent on the basis of data Kuznets presents; farm and nonfarm proprietors' income were handled as separate income types, the upper 5 per cent's proportion of each being derived on the assumption that it received no farm income, in accordance with Kuznets' treatment. The most important remaining adjustment which would be desirable, reranking of units to conform to the national income definition of income, cannot be made but would operate toward making the 1948-52 type-of-income distribution appear more favorable than that in 1929 to the proportion of total income accruing to the upper 5 per cent.

the top 5 per cent and the lower 95 per cent of the income distribution and tells us nothing about any effect changing type-of-income proportions may have had within the broad 95 per cent group. It should also be noted that, in dealing with changes in the size of various income flows, regard has not been given to changes in the number of recipients of different types of income. Both theoretical complications and the lack of detailed information for the twenties severely limit exploration of these points but a few observations closely related to changes in income types since 1929 may be noted.

First, the sharp rise in government civilian pay rolls and employment must have tended to enlarge the middle sectors of the size distribution as compared with both extremes, for the salary dispersion in government is smaller than that in private employment and mean earnings are not greatly different from the all-industry average.

Second, farm families are disproportionately concentrated at the bottom of the size distribution. Hence, the pronounced drop since 1929 in their number must have acted to reduce the number of low-income units. If, in addition, the average income of farm families increased more than of nonfarm families, as occurred from 1929 to the 1948-52 period as a whole, the influence exerted towards lessening of relative income differences in the over-all distribution of personal income must have been accentuated. Goldsmith, Jaszi, Kaitz, and Liebenberg have confirmed this in the period from 1935-36 to 1947. The decline in the relative importance of farming as an activity must be viewed as an influence reducing income dispersion, whereas, if regard is not given to changes in the numbers dependent upon different income sources, a decline in the ratio of aggregate farm income to total income must appear to increase relative income differences since farm income is so little received by the top income groups.

Third, the two national income shares which have shown very sharp relative declines—interest and rent— are largely supplementary rather than primary income sources. In this respect they differ sharply from employee income, farm and nonfarm proprietors' income, and corporate profits, the bulk of each of which accrues to units for whom it is the largest income source. The impact of a decline in interest and rent upon the pattern of family living standards must therefore have been much less than that of a similar change in any of the primary income sources.

Although it is not due to changes in the type-composition of income, there has actually been a substantial reduction in the share of the total national income accruing to the top 5 per cent, as is shown by adjustment to a national income basis of the personal income distributions for consumer units of Goldsmith, Jaszi, Kaitz, and Liebenberg. This reduction resulted entirely from the fact that this income group received

a smaller proportion of each major type of income in 1948-52 than it did in 1929. That such reductions actually occurred is confirmed through 1948 by Kuznets' data for the separate income types.

It is probably true, also, although here the evidence is not quite conclusive, that there has been some decrease since 1929 in the relative dispersion of particular types of income, and particularly employee income, within the lower 95 per cent of the distribution. Geoffrey Moore reviewed some of the collateral evidence which bears upon this point at these meetings two years ago.

## V

Goldsmith, Jaszi, Kaitz, and Liebenberg find, however, that this decline in the upper income group's share since 1929 has been larger on a personal income or income payments basis than on a national income basis. This is not surprising because we have already seen that on a payments basis the tendency towards smaller relative income differences has resulted not only from shifts in the proportion of individual income types received by the upper groups, which for single types affected the distribution of personal income and national income in substantially similar fashion, but also from changes in the importance of the different types of income payment.

The reason that shifts in the composition of income by type contributed importantly to a reduction in the share of personal income received by upper income groups, when we have just found that changes in the type pattern of earnings as they arise in production have had no such effect, lies largely with government in its role as tax collector and payer of transfer incomes.

The most important single factor has been the difference in movement between before-tax corporate earnings and dividends. We cannot know what dividends would have been in the absence of higher corporate taxation, but it seems probable that they would have been very much larger. Corporate profits tax liability equaled 13.6 per cent of corporate earnings before tax (including the inventory valuation adjustment) in 1929 and an average of 47.2 per cent from 1948 to 1952. The offset was almost entirely in dividends, which dropped from 56.6 per cent to 23.6 per cent. Undistributed earnings, including the inventory valuation adjustment, changed only from 29.8 per cent to 29.2 per cent (although there were substantial fluctuations in individual postwar years). The sharp drop in the ratio of dividends to before-tax earnings was reflected in an approximate halving of the ratio of dividends to total national income or total personal income. With the proportion of dividends received by upper income groups nearly four times as high as their proportion of total income, it was the declining weight of dividends which was largely responsible for that part of the reduction in the share

of upper income groups in personal income which can be ascribed to changes in the relative size of the different income types.

The growth of government transfer payments from 1.1 per cent of personal income in 1929 to 5.2 per cent in the 1948-52 period tended also to reduce the share of the upper 5 per cent as against the lower 95 per cent, but its more important effect, at least in real terms, was to improve the relative income position of the groups at the bottom of the income scale. The full effect of the growth of transfer payments cannot show up in statistical distributions of families or consumer units by size, however. This is because certain types, notably old age pensions and disability and survivors' benefits, frequently make it possible for the recipient to maintain a separate household where merger with another household would be forced in its absence.

Employer and employee contributions for social insurance, which are included in the compensation of employees share in the national income, are excluded from personal income. These contributions equaled 0.5 per cent of the compensation of employees in 1929 and 4.3 per cent from 1948 to 1952. Hence their deduction tends to dampen the effect upon the size distribution of a larger employee share. The rise in government interest, excluded from national income, was sufficient for its inclusion in the personal income aggregate to reduce by about one-fourth the drop in the percentage share of interest in total income as computed for private interest alone. In this respect, too, the transition from a national income to a personal income basis presumably dampens a change in the type distribution of income which tends to reduce dispersion, although the flows involved are complex. These influences are wholly overborne, however, by the substitution of dividends for corporate earnings and the inclusion of transfer payments.

While governmental actions have thus, on balance, strongly accentuated the drop in the share of the personal income received by the upper 5 per cent, it should again be emphasized that the more important influence has been the decline in that group's share of individual income types as they arise in the productive process.

It is important to note, however, that the shift from national income to personal income brings into account only in part the effects upon the size distribution of government taxation and expenditures. Kuznets has shown that the personal income tax in the postwar period has had a larger effect toward reducing dispersion in after-tax income than was the case in 1929. Goldsmith, Jaszi, Kaitz, and Liebenberg have analyzed intensively the effect of this tax upon the size distribution in the more recent years, as has Joseph Pechman, while Richard Musgrave has dealt with all taxes. I have attempted elsewhere to relate changes in income tax liability to the flow of the different types of income. But these matters go beyond the scope of the present paper.

## DISCUSSION

Allan M. Cartter: Ever since the appearance of Mr. Kuznets' recent study on income shares, the fact of declining inequality in the distribution of personal income has been widely discussed. In some cases, however, there has been a tendency to overlook the cautious manner in which Kuznets drew conclusions from his findings, for most of us would like to accept these as proof of the hopeful thesis of Marshall sixty-five years ago, that "the social and economic forces already at work are changing the distribution of wealth [used synonymously with "income" in this paragraph] for the better; . . . they are persistent and increasing in strength; and . . . their influence is for the greater part cumulative." These two interesting papers have aided much both in sobering our judgment and in throwing further light on the dynamics of changing income distributions.

Mr. Garvy has expressed some doubt as to the existence of a long-run trend of diminishing income inequality—or at least some doubt that this is a natural consequence in a maturing economy which will not reverse itself in the future.

Both papers have also stressed the very crucial choice of income definitions and the basic family unit used in measuring inequality statistically. I would certainly endorse Mr. Garvy's statement that "an analysis of income changes which disregards corporate savings is somewhat unrealistic." In fact, I would be tempted to go much further and say that almost all of the notable decline in the income share of the top 5 per cent of persons indicated in the Kuznets' study can be attributed to changes in corporate income positions and policies. For example, Kuznets added net corporate savings to disposable incomes and found that this had little effect on the decline of upper income shares. A very remarkable effect is achieved, however, if we add gross undistributed corporate profits to gross personal income. In working with the Kuznets figures to compare inequality in the U.S. and Britain I found that the decline in the income share of the top 5 per cent from 1937 to 1948 in the U.S. was 26.0 per cent, but only 5.3 per cent for personal income plus gross undistributed profits. In other words, if we were to treat corporations as we do partnerships in our income accounting, we would find that there was very little change in income inequality in this period. As Mr. Garvy has pointed out, during periods of depression such as the early thirties, under the usual definition we include as personal income amounts which are not income at all, but dissaving; and during prosperous periods such as today, we exclude 5 per cent to 10 per cent of actual income in the form of undistributed corporate profits. We would probably all agree that one cannot impute corporate savings to stockholders without some theoretical qualms, but I also agree with Mr. Garvy that it is even more unrealistic to completely exclude them. Given the unequal distribution of property incomes which both papers have illustrated and given the

increasing tendency of corporations to make only small fractional profit distributions, it would indeed be strange if there had not been a considerable movement towards greater equality of personal income in the last fifteen years.

Mr. Garvy has also suggested an interesting change in the income unit used to measure inequality. The usual per capita income measure may be useful from a welfare standpoint or in relation to consumer demand—although even in these two instances I think a per capita measure loses much of its meaning when one is concentrating only on the highest income groups. Using this traditional measure, if the fashions should change and everyone with an income of, say, $25,000 and above should suddenly decide to have an extra child, we would have a most amazing decline in income inequality almost overnight. Such a rapid change is, perhaps, unlikely, but at least part of the decline in personal income inequality from the mid-thirties to 1945 did arise because of changes in relative family sizes. Mr. Garvy's suggested new income recipient unit (including willing and able "zero earners") would be much more useful in measuring inequality as it arises in the market from the play of economic forces.

I was somewhat surprised that neither paper discussed the effects of inflation on factor returns as something possibly quite distinct from the effects of general prosperity and full employment. It is quite possible, as the twenties indicated, to have relatively full employment without much price inflation—and yet this has not been the experience of the last decade. To what extent has the postwar functional distribution reflected the effect of full employment alone or, alternatively, the effect of a more than usually rapid upward drift of prices and incomes, with all the leads and lags associated with such movements? If the Lindblom thesis is correct and trade-unions today have the power to force continual increases in money wages regardless of productivity, this is a question which we will certainly want answered.

In concluding, I think investigations into the interrelatedness of personal and functional distributions, as these two most interesting papers have shown, can be very rewarding in shedding light on the rather hazy link between our traditional, impersonal distribution theory on the one hand and the observable economic rewards received by real flesh and blood persons on the other.

SELMA F. GOLDSMITH: One of the most interesting parts of George Garvy's paper is his discussion of the impact on the size distribution of income of variations in the definition of income. Garvy's argument, as I see it, may be summarized as follows: He recommends that for certain purposes the definition of the income that is distributed by size be altered to include several items not now covered, such as realized capital gains and certain special types of income currently charged as business expenses, and that account should also be taken of various kinds of income produced that are not currently distributed to individuals. If this were done, he says, the drop since 1929 or 1939 in the percentage share of income received by the top few per cent of the population would probably be much smaller than is otherwise the case. Garvy concludes that until we are in a position to quantify the several adjustments in income

definition that he proposes, we should not generalize about the changing income share of the top few per cent of the population.

Now, as Garvy says, the fact that the particular definitions that are employed often have a marked effect on the statistics has long been recognized by persons working closely with the source material in the size distribution field. For example, my colleagues and I have found that, as nearly as we can approximate, the decline in the share of the top 5 per cent of consumer units from 1929 to 1950 was smaller on a national than on a personal income basis. The most important factor explaining the smaller decline was the substantial increase over this period in corporate earnings not distributed to individuals (including the corporate profits tax). These undistributed profits are part of the national income measure of the Department of Commerce but are, of course, excluded from personal income.

It is not possible with the statistics available to measure the effect of the definitional adjustments in personal income that Garvy suggests. While I do not agree with him as to the practicability or advisability of introducing certain of these adjustments, the net effect of their inclusion presumably would be to reduce the decline that shows up in the relative share of total income received by the top few per cent of the population. However, I disagree with the implication in Garvy's paper that the inclusion of these definitional adjustments might make the decline practically disappear. To raise the relative share of the top 5 per cent of consumer units in 1950 by almost 10 percentage points to the same proportion as in 1929 (i.e., to approximately 30 per cent), about 30 billion dollars would have to be added to the 44 billions of family personal income we have estimated was received by this group. (This is a minimum addition based on the assumption that in 1950 all of the extra income involved in the definitional adjustments would have accrued to the top group and that in 1929 the relative share of the top 5 per cent would not have been raised at all by these adjustments.) It is extremely difficult to imagine that the adjustments in the definition of personal income could be of this order of magnitude.

What is less generally realized is that differences in the definition of the income recipient unit frequently have as great or even greater effect on the statistics than differences in the definition of family income. Dr. Kuznets, as you may know, measures the share of income accruing to the top few per cent of the population, not to the top few per cent of families or income recipients. That is, he bases his classification on per capita rather than per family income, a procedure which enables him to develop a longer time series than could otherwise be obtained. Kuznets determines the income of the top few per cent of the population by ranking individual income tax returns in each year by size of per capita income—obtained by dividing the reported total income in each bracket by the number of reported exemptions—and then cumulating downward the reported income and population (exemptions) until he reaches the point where 1 or 2 or 5 per cent of the total population is accounted for.

In order to compare his results with those of the various family income studies, Dr. Kuznets has reranked the family units in the latter by size of per capita instead of per family income and then compared the relative share of

the top few per cent of the population shown in those studies with his own income-tax-based figures. Since Dr. Kuznets generously gives us much of his work sheet material in the appendices of his recent book, it is possible to calculate the effect of this reranking procedure on the family income statistics. In 1935-36, for example, if we start with the top 5 per cent of family and single person units ranked on a family income basis, we find that only one-half of the population comprising these units remains in the top 5 per cent after Dr. Kuznets has reranked on a per capita income basis. The other one-half—consisting mainly of persons in larger sized families—shift out of the top group and are replaced to a very large extent by single person units from the middle income ranges. As a result, the top 5 per cent of the population ranked by Kuznets on a per capita income basis accounted for a much larger proportion—about 10 per cent—of the total number of family and single person units in 1935-36.

I am not suggesting that a classification in terms of families would alter the broad pattern of change shown by Dr. Kuznets' figures. In fact, a time series that we have recently developed shows that on a family basis there was a marked decline in the relative income share of the top few per cent of families between 1929 and 1950—though somewhat dampened as compared with Dr. Kuznets' data. What I want to emphasize is the fact that the top 5 per cent is not a uniquely defined group any more than a single definition of income meets the needs of different types of analysis.

Margaret G. Reid: As I read these papers and listened to their presentation several thoughts ran through my mind: that considerable progress has been made during the past two decades in the estimates of personal income-size distribution for the nation as a whole and somewhat less progress in estimates of distribution by type of payment; that such estimates are extremely complex and still involve numerous unresolved conceptual problems of sufficient importance to affect the trends exhibited by the distributions; and that both series of estimates exhibit considerable stability of distribution. I use the term stability in full cognizance that Mr. Denison did note changes in the percentage of total income going to certain types of payment and that the findings of more than one investigator have indicated a decreasing inequality in the size distribution of personal income. I wish to comment briefly on the latter.

Mr. Garvy, in his paper mentioned several reasons why estimates of size distribution so far provided seem likely to overstate any decline in the inequality of personal incomes received. My guess is that his list by no means exhausts the factors so far unaccounted for in the estimates, the net effect of which seems likely to support the hypothesis of relative constancy of pattern. One thing that I would like to see investigated further is trends in income-size distribution of consuming unit by income status, such status being measured by the systematic component of income that averages the variations which occur due to transitory or random variations of annual incomes from their trend values. Income status might be thought of as a moving average of annual incomes. In estimating such moving averages many complex prob-

lems would arise in multiple-earner families and due to the disappearance of consuming units when a marked decline in income brings a doubling up of consuming units previously maintaining separate households; or on the other hand due to the emergence of consuming units when increased income leads to the undoubling of households. In spite of such difficulties, estimates of the size distribution of the systematic component of incomes that determines income status seems worth attempting because such income is basic to an understanding of the distribution of consumption levels. I would also like to see further attention given to the effect of the age distribution of the population. Considerable change occurred between 1930 and 1950, for example, in the distribution of the age of earners. If the change in equality of distribution of personal income is due to this, it implies something very different from change in equality due to other factors. There is, furthermore, the effect of changes in income in kind. Most estimates of income-size distribution completely ignore this type of income. The percentage of the total population on farms has been decreasing and there has been an increased tendency for farm people to buy rather than produce for themselves. The omission of food and fuel from the home farm from measures of income-size distribution has probably contributed somewhat to the declining inequality reported for recent decades. If the interest is in the distribution of real income, it would be necessary, also, to consider the effect of the increased participation of married women in the labor force. This appears to be inversely related to the income of the husband; hence it has tended to contribute more to the incomes of consuming units of low- than of high-income status. The increase in the money income by the labor force participation of the wife has probably in part been offset by a decrease in consumer production; i.e., production by and for the consuming unit. The development of day nurseries for the care of children is only one manifestation. Thus any tendency for earning by the wife to increase the equality of money income of consuming units tends to overstate the increase in the equality of real incomes.

Measurement of income distribution has been accompanied by a vast accumulation of data. The nonspecialist in this field is likely to be bewildered by the current abundance, even in the absence of a variety of interpretations. Variety of concepts among sets of data is in part responsible; and paradoxically confusion has also arisen by too little variety in concept. What is needed is explicit recognition that different income concepts serve different purposes and that a variety of estimates is needed. The road to clarification and further progress calls for stock-taking as to purposes data on income distributions might and should serve. Economists might well give more attention to the role of income distribution in the functioning of the economy and the various ways in which income data available or feasible could be used to test important hypotheses. I have been wondering whether notions of social justice and the belief on the part of some and conversely the disbelief on the part of others in the existence of exploitation of one group by another has not in large measure provided the frame of reference for research in this field. In any case, the annual estimates of the types reviewed by the major papers may be quite adequate to combat grossly erroneous notions concerning trends in income

distribution expressed by critics of the economic system so that research effort in income distribution can be expanded in other fields.

Understanding the economic implications of the income distribution calls for increased attention to forces affecting it and its relation to economic processes. Economists may find it advantageous to know more about its effect on the mobilization and utilization of productive resources; on the level of demand for consumer products in general and conversely on the level of savings; and on the level of demand for selected consumer products. To these rather conventional questions I would like to add a fourth much less frequently asked; namely, the effect on the income-size distribution of variations in the standard of living—that composite of things which people are striving for and will incur marginal time and other costs in order to achieve. Each of these questions must interrelate facts on income distribution with other aspects of the economy. Questions bearing on the second and third involve knowledge of the size distribution of the systematic component of incomes of consuming units together with knowledge of its effect on demand. Quite different kinds of information must be available and numerous relations examined to relate income-size distribution to the process of the mobilization and use of productive resources; for example, its role in migration, in differential wage rates among occupations, in drawing into the labor force supplementary family workers such as married women who weigh costs in terms of consumer production foregone. The relation of standard of living to income distribution is very complex. Perhaps comparisons among economies throughout the world at various stages of industrial development will throw new light on the significance of the standard of living.

As questions of these types are tackled, clear-cut purposes will lead to refinement of income concept, and doubtless concepts useful for one purpose will not be useful for others. Such adaptation of concept to purpose should reduce confusion. In such investigation specialists in the technical characteristics of data cannot work alone. They need the co-operation of economic theorists—especially those with some experience in empirical testing of hypotheses. The economist formulates the conceptual model and with the specialist in the income data appraises their usefulness for the purposes in mind and the procedures to use.

Alfred H. Conrad: I believe that the major contribution of the papers presented has been the reconciliation and interpretation of income distributions which have been described, on the one hand, as remarkably stable, and, on the other, as exhibiting revolutionary changes. Mr. Denison, on whose paper I shall concentrate, has been able to lay the paradox most effectively by reducing the degree of aggregation in the data. He points out, first, the distinction between shares in income produced (the national income proportions) and shares in income payments (the personal income distribution). Beyond this, in order to introduce measurement of structural changes in the economy, he disaggregates to more restrictive, homogeneous units, defined according to ownership forms and size of business. While I have set myself as a curb for this discussion, that I shall not criticize Mr. Denison for not having done

in my way what he never tried to do at all, I will discuss some procedures which I believe to be the logical and necessary extensions of his method of analysis.

The first question to be considered, as Dr. Reid has remarked, is what we are concerned to find out when we compare degrees of inequality. There are two traditional approaches, both proceeding from notions of justice. The first, best represented in the writings of Mr. Dalton and Mr. Lerner, sets equality as a standard of justice. The second has been given its classic treatment by J. B. Clark and finds in the marginal products of labor and other factors the fair shares in the product. But these are notions of what ought to happen in competitive or controlled systems and have little, if any, predictive value either with respect to the distribution itself or those other variables which depend on the level and distribution of income. The justice arguments require more complete welfare systems; the predictive possibilities depend on more specific, disaggregated data and analytic procedures. The questions are: How does the distribution influence the level of consumers' expenditure and the incentives to work and to invest? Can we identify, statistically, the determinants of changes in the distribution? For both of these questions, as Mr. Denison has clearly indicated, reducing the degree of aggregation in the data is the first requirement. An example in consumption analysis will point up suggestions in the direction of disaggregation made by both speakers.

Much of the argument that consumption is essentially linear in income depends on findings of the 1935-36 Consumer Expenditures study. But, even if the function were concave with respect to the income axis, temporary reductions from the top income classes during the depression, coupled with lagged response of consumption habits to income (as described by J. S. Duesenberry), would make the consumption-income array more nearly linear. What we should then have, as a result of identifying our units in terms of the income received in just one period, is a consumption function distorted by the aggregation of groups not at all homogeneous with respect to their consumption behavior.

Mr. Denison identified the "ordinary business sector" and then, within that division, distinguished several farm and nonfarm ownership forms and property income sources. These are important steps toward achieving homogeneous sectors. Frank Hanna, investigating the sources of regional variation in income, has used industry-group data to analyze the effect of regional variations in the industry-mix. I will propose an even more extreme disaggregation as a means of explaining size distribution changes. Before considering the model, however, it seems worth while to outline briefly the reasons for and limits of sectoring. As John S. Chipman has pointed out, sectoring is undertaken in order to reduce the differences occurring within a group's behavior patterns to those due to random causes. Within a homogenous group, variation —at least for the relevant variables—should not be systematic. The problems of small numbers and of statistical estimation of parameters set the lower limits. Sectors should not be so restrictive that differences between the groups are simply random.

A model for determining the income distribution by size by input-output

procedures has been developed at the Harvard Economic Research Project. The method—in many respects like Hanna's—decomposes income changes into one part resulting from shifts between industries and another due to changes in the proportions of occupations within industries. The distribution of labor incomes may change as the result of shifts in employment weights among industries with different average wages, shifts in occupational composition within industries as the level of output varies, and changes in the average wage level or differential structure of wage rates. The model, limited to labor in the first tests, assumes that the rate structure is stable and that labor inputs are linear, homogeneous functions of each industry's output. The data needed are a set of occupational composition patterns with associated wage rates and a set of industry weights. The determination of each industry's total output specifies, in turn, the distribution of income among all employed workers. The model has been found effective in determining total wage income, but the important test arises when disaggregation is attempted. The problem, there, as in all input-output research, is the stability of the income coefficients.

Professor Leontief's work on structural change in the input-output framework has provided some interesting empirical evidence relating to Mr. Garvy's remarks about the turning point in income distribution about 1929. Comparisons of the technical coefficient matrices for 1919, 1929, 1939 show that direct laborsaving changes were prevalent before 1929 and that in the 1929-39 period the major savings were in nonlabor inputs (W. W. Leontief, *et al.*, *Studies in the Structure of the American Economy*, Chapter 2, "Structural Change"). Within the labor group, the proportion of unskilled labor went down; the most rapid rise has been among skilled workers, clerks, and professionals. The fall in capital requirements has reduced sharply the likelihood of an accelerated rise in capital's share of national income. The effect of the changing proportions within the labor group has been to increase the weights in the middle bracket of the size distribution.

At the end of his paper, Mr. Denison introduced the government "as tax collector and payer of transfer incomes." I applaud his remarks on the effect of taxes and transfers and regret that the scope of his paper could not have been somehow extended to include more discussion of income redistribution. There are important questions to be answered in this area. How does the provision of benefits and services in kind—parks, hospitals, police and fire protection—affect the consumption habits of the different income groups in the population; i.e., to what extent can we count these services as income supplements? How do taxes and government expenditures affect the flow of original, producers' income? How much effect has redistributive government finance had on the inequality of incomes, both directly and indirectly?

By allocating and imputing all taxes and services as negative and positive transfers to spending units ranged according to incomes, I have measured redistribution as the change in the degree of inequality between two income streams, roughly identical in total. The differences are significant: the coefficient of concentration (Gini) for 1950 decreased from .447 for "consumers income minus transfers" to .348 when transfers and services were added to and taxes subtracted from the income stream. The major part of the shift was

effected by taxes: the coefficient moved from .412 to .367 when taxes were deducted from consumer incomes. Using the study by J. H. Adler and E. R. Schlesinger[1] for data I computed roughly comparable coefficients for 1938-39. The change in the coefficient of concentration in that year was from .440 to .372, significantly less than in 1950. The direct effects of government finance were evidently greater in the recent postwar years than in the depression of the thirties.

Important limitations of this method must be noted: redistribution, like transfers in foreign trade, initiates its own secondary wave of income-induced effects through changes in consumption. Direct redistribution may have effects on the level of income or on the structure of the economy which will counter the intentions of a policy of equalization. The major indirect effects may be measured in a small general equilibrium model in which the multiplier nature of Leontief input-output solutions is exploited. The system consists of a set of "disposable" income equations for the sectors in the economy: the familiar industrial sectors, and the households grouped according to size of producer's income. Given a government budget as the nonhomogeneous element, the system has a unique solution, a determinate set of income levels. The value of this procedure is that the simultaneous solution of the income equations yields a multiplier effect, enabling us to compute much of the indirect as well as the direct effects of redistributive finance. The results of some matrix multiplier computations for 1950 are interesting and worth noting here: the secondary effects cause the rich to lose less and the poor to gain more than appears to be the case when only the direct additions and subtractions are computed. There is less equalization of relative shares in the total multiplier solution than appeared from the direct impact computation.

This is, I believe, the logical extension of Mr. Denison's concluding paragraphs. The general equilibrium solution answers the question of how much redistribution is achieved after the secondary effects of the transfers have worked through the economy. The question of whether a redistributive fiscal policy will frustrate its own broader intentions cannot be decided without this evidence. But this procedure and, even more, the predictive model described earlier depend on the structural details available in the studies of income sources and factor shares described by both speakers. This outline of the possibilities inherent in further disaggregative techniques is in no way intended to depreciate the excellence of the studies presented and interpreted by Mr. Denison and Mr. Garvy.

[1] "The Fiscal System, the Distribution of Income, and Public Welfare," in *Fiscal Policies and the American Economy* (Kenyon Poole, ed., 1951).

# WAGE DETERMINATION IN THE AMERICAN ECONOMY

## Potentialities and Limitations in the Use of Collective Economic Power in Varying the Compensation of Labor and Capital

## TRADE-UNIONISM AND DISTRIBUTIVE SHARES[1]

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It is a perennial question whether trade-unionism plays the role of Robin Hood or Jesse James. (See, for example, the discussion in *The Impact of the Union*, David McCord Wright, editor, 1951.) Robin Hood was the legendary hero of the people, albeit he is now considered a subversive character in some quarters, who robbed the rich to aid the poor and did so in a most sportsmanlike manner. Jesse James was the bad man who robbed the rich and the poor alike with nothing but loss to society. Clinton S. Golden and Harold J. Ruttenberg (*The Dynamics of Industrial Democracy*), among others, see trade-unionism in the former role; Charles E. Lindblom (*Unions and Capitalism*) and others, in the latter.

This question is an interesting and perhaps even urgent one, but to answer it three other questions must first be answered: (1) Can trade-unionism redistribute income? (2) Does it, within a given context, have the actual power and the motivation to do so? (3) What are the consequences if it both can and does? This paper is concerned only with the first of these three questions and with only a part, although a major part, of that question. Specifically it discusses whether trade-unionism can affect the distribution of national income as between wages, or wages and salaries, on the one hand, and profits or entrepreneurial income, rent and interest, on the other. It does not treat the influence of unionism, if any, on the internal distribution by industry or by occupation or by locality of the share going to labor. Nor does it treat the influence of unionism as compared with that of corporate power, of changes in technology, and so forth. It should be noted, also, that attention here is directed to the percentage share of labor in national income, not its absolute share, although a few comments about the latter will be

[1] Melvin K. Bers, Graduate Research Economist, Institute of Industrial Relations, University of California (Berkeley), was most helpful in the development of this paper.

made at the end, since relative and absolute shares can and sometimes do move in opposite directions.

Now some consider this a problem of little importance for, it is said, individuals are concerned not with the distribution of the national income among economic and social classes but with the personal distribution of income. (See comments of Kenneth E. Boulding, Milton Friedman, and Paul A. Samuelson in *The Impact of the Union*, pages 352-355.) This is no doubt true, but distribution by aggregate shares does hold interest for economists and policy-makers. It was with this problem that classical economics first started, and it is one which has come to the fore again in recent times.

The past two decades in the United States have witnessed the advance of a great economic and political force: a strongly developed and widely spread trade-union movement. This movement has had as one of its proclaimed goals "a larger share of the nation's income" (Golden and Ruttenberg, *op. cit.*, page 151). Has this goal been attained? Changes in labor's share, or their absence, may throw some light on the strength of the trade-union movement, on, to use the terminology of J. K. Galbraith, whether it has "original" or only "countervailing" power (*American Capitalism*, page 143).

An examination of the behavior of labor's share may also illuminate the policies of the trade-union movement and indicate which of these policies, if any, may raise, or perhaps reduce, wages as a share of national income and under what circumstances. An investigation of changes in labor's share can also help indicate how productivity gains are shared out, how employers respond to increases in money wages under different environmental conditions, how wage-price-profit-relationships are structured, how governmental fiscal policies affect broad segments of the economy. Finally, aggregative distribution has implications for personal distribution itself: an increased share for wages and a decreased share for interest, for example, may result in a more equitable distribution among individuals. And so we ask the question: Can trade-unionism affect distributive shares?

Now the term "trade-unionism" instead of "collective bargaining" is used deliberately. Unions can and do affect actions of both employers and governments, and some of both kinds of actions have potential or actual consequences for distributive shares. To explore the impact of unionism in only the economic and not also the political sphere is to tell but half the tale.

Any approach to this problem encounters two important obstacles. The first is the great lack of adequate statistics covering long enough time periods for a sufficient number of countries so that definitive conclusions might be reached. The second is even more formidable. It is

that so much more is changing in a dynamic economy than just the amount and the direction of the power of trade-unions. To separate out this single factor alone, with any great degree of precision, is impossible.

Consequently, we must, as yet, rely on judgment rather than rigorous analysis, and the judgment of the economists who have commented on the question of whether trade-unionism can affect distributive shares has varied. Boulding, Dobb, Fellner, Suffrin, among others, have generally favored the negative; Levinson, Phelps Brown and Hart, Stigler, Tripp, among others, have, with more or less hesitation, supported the affirmative; while Burkhead, Douglas, Dunlop, Kalecki and Kuznets, among others, have, in their studies of labor's share, made no mention of trade-unionism.[2] It should be noted as an important qualification that the members of both the first two groups have been concerned with collective bargaining and distributive shares, not with trade-unionism in its totality.

The confusion of tongues may come, in part, from the apparent simplicity of the question as customarily phrased: Does (or can) trade-unionism (or collective bargaining) affect distributive shares? An affirmative or negative answer seems required. A more fruitful phrasing of the question might be: Under what circumstances, if any, will trade-unionism affect distributive shares and in what fashion? Trade-unionism is more than one thing and it operates in more than a single environment. It is the thesis of this paper that a certain kind of trade-unionism under certain conditions will have no effect; that a certain kind of trade-unionism under certain conditions will raise labor's share; and that a certain kind of trade-unionism under certain conditions will reduce labor's share.

First, we shall present several kinds of trade-unionism; second, the results they are likely to have in the environment or environments appropriate to each; and, third, the American and British experiences in relationship to this analysis.

[2] See Kenneth E. Boulding in *The Impact of the Union, op. cit.*, p. 148; Maurice H. Dobb, *Wages* (Pitman, 1948), p. 152; William Fellner, *Competition Among the Few* (Alfred A. Knopf, 1949), p. 311 ff.; Sidney C. Suffrin, *Union Wages and Labor's Earnings* (Syracuse University Press, 1950); Harold M. Levinson, *Unionism, Wage Trends, and Income Distribution, 1914-1947* (University of Michigan Press, 1951); E. H. Phelps Brown and P. E. Hart, "The Share of Wages in National Income," *Economic Journal*, June, 1952; George Stigler, *The Theory of Price* (Macmillan, 1952); L. Reed Tripp, "Labor's Share in the National Income," *Annals of the American Academy of Political and Social Science*, March, 1951; Jesse Burkhead, "Changes in the Functional Distribution of Income," *Journal of the American Statistical Association*, June, 1953; Paul H. Douglas, "Are There Laws of Production," *American Economic Review*, March, 1948; John T. Dunlop, *Wage Determination Under Trade Unions* (Augustus M. Kelley, 1950); Michal Kalecki, *Essays in the Theory of Economic Fluctuations* (London: George Allen & Unwin, 1939); Simon Kuznets, *National Income and Its Composition, 1919-1938* (National Bureau of Economic Research, 1941); and *National Income: A Summary of Findings* (National Bureau of Economic Research, 1946).

## *Six Types of Unionism*

Unionism may be categorized in many ways for many purposes. For our purpose it is useful to distinguish among types of unionism in accordance with their broad economic purposes and whether these purposes are implemented through collective bargaining or through political action. We distinguish here among six types of unionism according to their attempted depth of penetration into economic processes and according to their reliance on economic or political methods. Depth of penetration is shown by three levels: bargaining over the money wage, bargaining over the real wage, and bargaining over distributive shares. These three levels of penetration taken together with the two kinds of methods—collective bargaining and political action—yield us our six types.

Before presenting these six types, certain qualifications are in order. First, we are concerned with unionism in democratic, capitalistic nations in an advanced state of industrial development where the economic order is generally accepted by the workers, not with the "agent of the state" unionism of a Communist or Fascist nation, nor with the revolutionary unionism of an unstable system, as in France or Italy, nor with the volatile unionism of a newly developing economic order. Second, our six types are something of caricatures. They exaggerate certain characteristics of unionism rather than draw a full picture, but this is inevitable in the presentation of analytical types. Particularly, several of the types tend to overlap in actuality, and some of them may never occur at all in pure form. Moreover, in these caricatures, we ignore the internal variations within each type. Third, the six types do not necessarily occur historically in the same order set forth here, although the first types listed do tend to come earlier in the historical process than do the others. The latter types generally result from more sophistication about economic processes and from the accumulation of greater power. Fourth, the different types are of quite unequal importance. Two of them may occur so infrequently in fact as to be considered freaks.

The six types of unionism—or, perhaps better, the six programs of unionism—follow:

1. *Pure and Simple Unionism.* Here the emphasis is on collective bargaining to raise the money wage.

2. *New Deal Unionism.* The essence of this type is a political alliance with other forces also concerned with securing a full employment economy through governmental action while bargaining for a higher money wage under the improved economic conditions.

3. *Improvement Unionism.* In this type the union bargains with the employer for a real wage (the escalator clause) and a share of increased

productivity (the improvement clause). It is unionism which is still pure but no longer so simple. "Pure and simple unionism" will, of course, also react to changes in the price level and in productivity but in a more informal manner.

4. *Direct Controls Unionism.* Direct governmental controls on a permanent basis are sought, particularly over prices. This is a counterpart of "improvement unionism" with a national bargain at the parliamentary level taking the place of a plant or industry-wide or even nation-wide bargain across the conference table. In Norway, the unions and the social democratic party have sought and secured a permanent price control law; and unions in the United States and Great Britain have been more favorably disposed to direct controls, under certain conditions, than have most other elements in the population. The Swedish trade-union federation seeks permanent price control on "monopoly products."

5. *Managerial Unionism.* Unions adopting this approach try to affect distributive shares at the plant or industry level through such devices as M. Bronfenbrenner has set forth in his article, "Wages in Excess of Marginal Revenue Product" (*Southern Economic Journal,* January, 1950): the "all-or-none" contract, profit-sharing schemes, union-management joint control of the industry with the union participating in price setting, control of entry of firms, and so forth. This might be called "not so pure and not so simple unionism."

6. *Labor Party Unionism.* Here again the effort is to control distributive shares but through influencing governmental action instead of through collective bargaining, by way of progressive taxation and various forms of subsidies.

### *Pursuit and Escape*

Each of these types of unionism is engaged in a grand pursuit—a pursuit mainly of the employer. And the employer is always trying, with more or less success, to escape. Now I do not wish to conjure up a picture of poor Eliza being chased across the ice by bloodhounds. Our Eliza is by no means always poor; nor do the bloodhounds always pursue very aggressively (they are often quite gentle creatures); and, moreover, in our drama Eliza does not always get across the river in time. Beyond that, the bloodhounds sometimes catch somebody else while chasing Eliza. They may even, inadvertently, catch themselves.

It is to this pursuit of the employer by unionism that we now turn our attention. The end conclusion will be that only through quite deep penetration into economic decision-making, either directly or indirectly through government, can unionism raise labor's share more than temporarily; and that unionism must approach the problem of dis-

tributive shares directly and consciously if it is to attain the goal of a higher relative share for labor. In the discussion which follows we shall relate type of program to degree of change. This assumes, of course, that unionism has the power to make each program effective. We shall, however, be taking power for granted and concentrating on the program and its likely results; but it should be understood throughout that the results will depend on power as well as on program.

Our focus will be on the impact and incidence of unionism, i.e., with the initial effect of a certain program on the share of labor, and, if this share is raised or lowered, what other share loses or gains. We shall not treat, except occasionally, with the consequences of such initial shifts in shares as they may in turn affect employment, the inducement to invest, the propensity to consume, productivity, and the like, although by affecting each of these economic variables a secondary shift in shares may well occur.

*Pure and Simple Unionism.* It is relatively easy for employers not to be caught by the economic program of pure and simple unionism. To begin with, union wages may not be raised above the rates which otherwise would have prevailed. If they are, there are two important links between wages and profits, and employers may elude pursuit at either or both of these two points. First, they may raise prices (and this is particularly easy to do if the union covers the whole industry); and, second, they may introduce laborsaving devices or otherwise raise productivity. (See the discussion in Fellner, *op. cit.*) Thus one would expect this kind of program to result in a higher share for labor only when unionism was particularly aggressive, as perhaps in its organizing period; when the market was "hard," to borrow the phrase of Phelps Brown and Hart (*op. cit.*), i.e., when it was pressing down on prices; and when laborsaving innovations or other improvements in the use of labor were not available. Presumably such gains in labor's share at the expense of profits would usually be only temporary, although Phelps Brown and Hart have suggested that employers once having had their margins cut may be content to leave them at lower levels for substantial periods of time and perhaps even permanently.

Pure and simple unionism may, under some circumstances, actually reduce labor's share and raise the share of profits, although by mentioning this possibility I do not wish to imply that it is a very normal occurrence. With the introduction by unionism of what the Webbs called the "standard rate," the natural spread of rates over a wide range from firm to firm[3] is greatly reduced or even eliminated. Within this range, in

[3] See, for example, R. A. Lester, "Results and Implications of Some Recent Wage Studies," in *Insights into Labor Issues,* edited by Lester and Shister (Macmillan, 1948). See, also, R. A. Lester, "Wage Diversity and Its Theoretical Implications," *Review of Economics and Statistics,* August, 1946.

the absence of unionism, firms are distributed in the wage rates they offer largely in accordance with their ability to pay. The more efficient firms, in effect, share their larger profits informally with their employees.[4] Good behavior by an employer consists of paying in excess of the going rate. Under the standard rate policy, however, it consists of paying the union rate. However, wage supplements, now quite important in many industries, are less likely to be standardized. Given any substantial degree of union sensitivity to the volume of employment, the standard rate will be set well below the capacity to pay of the more efficient firms. Some firms may be forced out of business, although this seldom occurs, and others may have their profit margins reduced, but for others the standard rate preserves for the firm itself that portion of profits it otherwise would have shared with labor. Whether the profit share would be larger more than temporarily, if at all, would, of course, depend on many things, including what happened to the entry of new firms, to prices, and to the volume of employment.[5]

*New Deal Unionism.* Under a program emphasizing the achievement of full employment through governmental policy, unions can chase employers faster with higher money wages than in periods marked by less than full employment, but employers can run still faster. The profit share rises and, even though the shares for rent and interest are reduced, labor's relative share of national income falls. In a depression, exactly the reverse happens and labor's share rises. Within this share, the salary share rises more than the wage share but, contrary to Kalecki, the wage share also increases. (See Dunlop, *op. cit.*, page 174 ff.)

Thus, over a period of time, a permanent full employment economy will show a lower average share for labor than one where prosperity and depression alternate. The permanent full employment economy, however, may show a higher share for labor than the prosperity period of a less stable economy, particularly because continued full employment and the conditions associated with it bring a shift away from debt and a reduction in interest rates. (The share of rent, however, may

[4] Note in this connection the observation of Douglas (*op. cit.*): "Quasi-monopolies and oligopolies may have shared with their workers the excess gains which they have made at the expense of consumers." See, also, comments on behavior of the "good" employer in Joseph Garbarino, "A Theory of Inter-industry Wage Structure Variation," *Quarterly Journal of Economics*, May, 1950.

[5] S. H. Slichter believes, on the contrary, that collective bargaining can cause the share of property to drop and the share of labor to rise. (*The Economics of Collective Bargaining* [Institute of Industrial Relations, University of California, 1950], pp. 36-38.) The elasticity of substitution of capital for labor is less than unity, he argues, and thus by forcing up wages, with capital not being easily substituted for labor, unions can raise labor's share. The validity of his conclusion depends on whether the elasticity of substitution of capital for labor is less than unity and whether unions can and do force wages above the levels which would exist in their absence. One can only speculate, however, about the relative elasticity of substitution of capital for labor.

rise over time because rents themselves, however sluggish, will tend to rise.) An economy with continuing full employment without inflation may also show a higher share for labor than one rapidly approaching full employment because wages will not be lagging behind prices as they do in this latter case. However, if permanent full employment is accompanied by constant inflation, lags will tend to hold the wage share down and the profit share up. Consequently, continuing full employment without inflation will result in a higher share for labor than will occur in an occasional period of full employment or one where permanent full employment and constant inflation go hand in hand. While we are inclined to agree with Morton[6] that union wage pressures do not cause inflation, still the governmental policies associated with New Deal unionism may, and inflation does, cut labor's relative share.

Full employment yields the unions a more favorable environment in which to bargain for money wages but one in which, while they are given an opportunity to chase, they cannot catch the employers. They must be content with catching, in terms of shares, the recipients of rent and of interest, and perhaps also their own members. In fact the chief beneficiary of New Deal unionism, in terms of shares (unless one separates out the share of the previously unemployed which, of course, goes up enormously), is entrepreneurial income. With their policies of the standard rate and full employment, unionism of our first two types might be viewed as the protector of profits.

The relative share, of course, is less important than the real absolute share and the latter rises for labor with the movement from less than full employment to full employment, although it may fall slightly with inflation.

*Improvement Unionism*. The policy of improvement unionism, as we have defined it, seeks to tie wages closely to the cost of living and to the increase in physical productivity. Wages tend to follow the cost of living and productivity in any event. This policy, by calling for quick and automatic adjustments, reduces the lag. Thus labor's share would tend to fall slightly less than it otherwise would on the upswing and rise slightly less (assuming the escalator clause is allowed to work downward as well as upward) on the downswing. Assuming, however, a full employment economy without inflation, the net results, as compared with what otherwise might happen, would probably be negligible.

The policy probably, on balance, slightly favors chronic inflation by reducing lags, although Ross and Reder have suggested that it will make the swings in both directions more violent.[7] It certainly favors in-

[6] W. A. Morton, "Trade Unionism, Full Employment and Inflation," *American Economic Review*, March, 1950.

[7] Arthur M. Ross, "The General Motors Wage Agreement of 1948," and M. W. Reder, "The Significance of the 1948 General Motors Agreement," *Review of Economics and Statistics*, February, 1949.

flation if unions obtain provisions calling for overcompensation for cost-of-living rises and increases in physical productivity. If such a policy of overcompensation becomes generalized over the whole economy, as it did in Finland,[8] and was effectively enforced, the share of labor would have to rise at the expense of some other segment.

The policy of improvement unionism may also result in a heightened public consciousness of inflation and thus in greater public measures to control it or to reduce its customary effects on the distribution of real income, as through the introduction of the universal escalator.

More generally, however, this is a policy designed not so much to catch the employers as to prevent them from running farther away. Individual employers, of course, can run away farther by having their prices advance faster than prices generally or by raising the productivity of their workers more than the general rise in productivity, but employers in totality cannot.

*Direct Controls Unionism.* The essence of this policy is direct price control by government. At least in the short run, profit margins can be held steady in an inflationary period or even squeezed, if enforcement is adequate, and the share of labor maintained or raised. By holding down rents, the share of labor can further be advantaged. Under this policy, with the government holding on to him, unionism can catch the employer and take some profits from him, although there may be some cost in volume of employment or size of total output.

*Managerial Unionism.* The program of this type of unionism is to control the distribution of income within the plant or, more usually, within the industry. The specific method may be an all-or-none bargain which obligates the employers to a certain specified wage bill (a given number of employees at a set wage rate) if he is to operate at all. This certainly can cut into profits, as compared with the customary rule of flexibility in the number of employees. The employer, however, may be able to escape the impact of the all-or-none bargain by raising prices or by increasing the output of his labor force.

A second method is direct profit sharing. Here the employer can only regain the original amount of profit he obtained by increasing the total amount, since some of the profit must be shared with his employees. A third device is partial or complete participation in the direction of the industry: the determination of prices and of output and the distribution of the gross returns. Instances even exist where the employers are given a general ceiling on their incomes and, if this ceiling is pierced, the compensation of employees is raised in one fashion or another. The incentive for efficiency, under such arranagements, lies more with the em-

[8] I am indebted to Walter Galenson for calling this experience to my attention. The arrangement grew out of negotiations between the trade-union federation and the federation of employers but was effectuated by government.

ployees than with the employers. This kind of policy is very limited in its actual application, but there is no doubt that under it, given enough power to the union, shares can be affected; labor can receive more than its marginal revenue product.

*Labor Party Unionism.* This policy relies on taxation and on subvention to affect not the income received in the primary distribution, which we have been discussing up until now, but rather the income retained after secondary distribution has taken place.[9] Through progressive taxation and subsidies, the real income available to labor can be raised as compared with that of originally more highly rewarded elements in the population. Here at last the employer can really be caught, although perhaps not as much as might first appear. Goods and services are taken out of the market place and given to wage and salary earners with the cost financed by taxes bearing heavily on other segments of the population.

### *American and British Experience*

American historical experience is consistent with the suggested impacts of these different union programs. This experience may be summarized as follows:

1. Employee compensation as a share of income originating within the business sector of the economy, after allowing for interindustry shifts in weights, has been quite stable over substantial periods of time. It was virtually unchanged from 1929 to 1950.[10]

2. This share was higher in depression (1930-33) and recession (1938) than in more prosperous periods.

3. During wartime inflation this share sank a bit but rose later in the one area where price control was most effective—nonfarm corporations.

4. This share rose in 1945-47 when corporation profits were depressed by reconversion and when unions were unusually aggressive.

5. After adjustments for allocable taxes on income, compensation of employees rose more comparatively from 1929 to 1950 than did other shares. The great loser, after taxes, was the share going to corporate profits.

6. Labor's share of income, industry by industry, has fared no more favorably in unionized industries than in nonunion. Stigler notes that "it is possible that the unions succeeded in increasing the share of labor

[9] Efforts to control secondary distribution may, of course, also change the pattern of primary distribution. (See Geoffrey H. Moore, "Secular Changes in the Distribution of Income," *American Economic Review*, May, 1952.)

[10] Edward F. Denison, "Distribution of National Income," *Survey of Current Business*, June, 1952. (The data for headings 1 through 5 are all from Denison.) Over the past century, however, labor's share of national income has gained at the expense of farm income. (See Simon Kuznets, *Uses of National Income in Peace and War* [National Bureau of Economic Research, 1942].)

income in total income." He shows that wages and salaries as a percentage of income originating in selected manufacturing industries went up slightly from 1929 to 1947 in unionized industries while it went down slightly for all manufacturing. However, had he taken 1929 to 1950 he would have found both figures declining substantially and in about the same amount, which would have implied a different conclusion.[11] Levinson may also have been misled by his selection of a terminal year. He found that the "union" industrial groups showed a gain in the share of employee compensation (excluding compensation of corporate officers) while the "nonunion" industrial groups remained approximately unchanged between 1929 and 1947 (*op. cit.*, page 106). Yet had he taken 1929 and 1951, he would have found a different situation. Over that period, the share of the union groups remained approximately unchanged while the share of the nonunion groups showed a gain. Our own investigations (conducted by Melvin K. Bers) show no significant relationship between the degree of unionization and labor's share, industry group by industry group.

7. Degree of unionization by metropolitan area is not significantly related to labor's share of manufacturing income in these same areas according to our own calculations.[12]

The conclusion from this record is that trade-unionism in the United States to date has had no important effect on labor's share of national income except as (1) it has encouraged an employee-oriented national economic policy with heavy emphasis on full employment (which has served to reduce the share of labor), (2) it has supported effective price control, (3) it has put wage pressure on employers temporarily unable to recapture profits (the special case of the reconversion period when output was limited and the administered prices for durable consumers' goods were rising comparatively slowly), and (4) it has furthered progressive income taxes. There is no evidence of any significant effect through normal collective bargaining. The American experience throws no light on the performance of two of our six types of union programs (improvement unionism and managerial unionism) because they were not widespread enough to have a noticeable impact.

The British history is different in detail but not in essentials. The available data are, however, much more adequate for analytical purposes and cover a far longer period. They may be summarized as follows:

1. The share of wages (not employee compensation) has risen very

[11] *Op. cit.*, p. 259. The pertinent figures are for unionized industry: 1929 (69.1), 1947 (70.1), 1950 (61.7); and for all manufacturing: 1929 (73.1), 1947 (71.5), 1950 (66.1).

[12] By Melvin K. Bers. A more detailed study is being made by William Goldner, Research Economist, Institute of Industrial Relations, University of California (Berkeley).

slightly since 1870, from a little under to a little over 40 per cent; but the proportion of workers among the gainfully employed has gone down substantially. As a result, the average income of wage-earners has gained more than that of the rest of the population. This comparative gain has not been at the expense of profits but rather initially of rent and more recently of salaries. Some of the latter comparative gain may be due to the rising skill level of manual workers and the declining skill level of salaried workers.

2. The share of wages over the cycle has not varied much; sometimes it has gone up slightly and sometimes down slightly. In the Great Depression it rose only very moderately. The rise in employee compensation as a share in the United States during a depression may be due largely to the inclusion of salaried workers whose rates are probably cut less and whose employment most certainly is. One would expect the wage share itself to rise less in Britain than in the United States in the Great Depression both because there is a lower capital-to-labor ratio there and because the amplitude of the fluctuation was not as great.

3. Unionism, according to the excellent study of Phelps Brown and Hart (*op. cit.*), has had an upward-forcing impact on the share of wages only when the unions have been aggressive and the employers faced a "hard" market, so they could not escape easily and quickly through higher prices. Phelps Brown and Hart note that in the United States the market is more protected and thus more likely to be "soft," allowing employers to escape. Perhaps, also, British unions have been more aggressive historically (although they curbed their aggressiveness after World War II with a policy of wage restraint) and particularly in times of hard markets. In the United States, strong trade-unionism and soft markets have gone closely together. The American employer may also have had a greater chance to evade wage advances through labor-saving innovations. Hard markets are likely to be particularly hard for agricultural products and thus some of the gain for wage-earners is at the expense of agricultural producers; although labor's share has risen, under these conditions, also within the nonagricultural segment of the economy taken by itself.

4. The share of wages remained constant in Britain during World War II, probably, in part, because of the more effective price control.

5. A substantial increase has taken place, as compared with the period prior to World War II, in the real income, after direct taxes, of wage-earners as compared with other elements in the population.[13] Social expenditures for food and health, however, have been largely offset by higher taxes on beer, tobacco, and other purchases; so that

[13] See Dudley Seers, *The Levelling of Incomes Since 1938* (Oxford, England: Blackwell, 1951); also the London *Economist*, January 21, 1950.

the wage-earners have made no net gain from these subsidies. (Findley Weaver, "Taxation and Redistribution in the United Kingdom," *Review of Economics and Statistics,* August, 1950.) This British experience suggests two modifications of the conclusion drawn from the American record. First, wage-earners may gain at the expense of salaried workers. Second, full employment probably reduces the share of wages much less than the share of all employees, and unions are particularly concerned with the share of wages.

### *Conclusion*

Samuel Butler once observed that "life is the art of drawing sufficient conclusions from insufficient premises." This is too often the task of the economist. He seeks answers to important questions which lend themselves to no sure response. So it is here. We have, however, ventured a reply to our question: Can trade-unionism affect distributive shares? Part of the answer is that, under certain conditions, it can. It can reduce labor's share through the furtherance of a policy of continuing full employment and perhaps also through the application of the standard rate. It can raise labor's share, in particular, through standard collective bargaining when employers cannot quickly escape; or through support of the application of effective price controls; or, in terms of kept income, through the encouragement of progressive taxation and subventions.

The other part of the answer is that, while it can raise labor's share, it cannot raise it by very much. In the United States, to date, the impact has been minimal. The power of trade-unionism, to revert to Galbraith's terminology, has been apparently countervailing and not orginal. One can only speculate about what might have happened if this countervailing power had not developed; but the American worker, in its absence, certainly would not have been condemned to a share so grossly below what one might expect as are the poor South African workers, as shown in Paul Douglas' statistics (*op. cit.*). In Great Britain, on the other hand, through what might be viewed as original political power, a significant redistribution has taken place.

Now it might be concluded that all this union pursuit of the employer is much ado about very little and that unions are relatively powerless institutions in a market which responds to other, more persuasive forces. This may well be. However, this could not be known surely in advance and it is worth knowing. Workers could not be expected to accept the broad allocation of income between and among distributive shares without having their organizations explore the possibilities of major shifts. The probing of the situation by the unions gives the workers a greater assurances of the equity or at least the inevitability

of the distributional pattern. Thus the pursuit of the employer may be of worth even if he is never caught at all.

To the extent that distributive shares are affected, this comes about only from a significant shift of decision-making power away from the employer to the union or the government or both. Boulding has written that "distribution depends on decisions and mainly on the decisions of the capitalists" (*op. cit.*, page 148). But as more decisions are made by trade-union leaders and government representatives, they too can affect distribution, but this requires that they enter a long way into the direction of economic processes at the plant or industry or national level. The avenues for escape by employers must be narrowed or closed if labor's share is to rise at the expense of profits. Knowledge of this fact may, of course, serve to sharpen labor's desire to deepen its control, directly or indirectly, and management's desire to resist.

This brings us up against the problem of absolute shares. As we noted at the start, they may move in an opposite direction from relative shares. For example, in moving toward full employment, the absolute share of labor (whether in real or money terms) will rise with the expansion in the number of jobs, yet the relative share will fall. If the policy of the standard rate has any effect in lowering labor's share, it may, at the same time, by penalizing the inefficient and rewarding the efficient producer, raise the absolute share of labor.

Similarly, price controls or progressive taxes may so reduce efficiency and retard investment that the absolute share of labor in the long run is lowered even though the relative share is increased. It is the size of the absolute share which is the more important, even in the short run; and so the significance of what is happening to relative shares can be understood only by reference to the much greater significance of the trend in the magnitude of absolute shares.

We started with the query whether trade-unionism was a modern Robin Hood or a Jesse James. All we have concluded is that it can play either role, because it can take a share of income from one group and bestow it on another; but in the economic drama it will seldom hold the center of the stage in either role. Whether, in fact, trade-unionism plays the one role or the other or neither takes us beyond the subject matter of this paper to a consideration of the other two questions posed at the outset having to do with the power and motivation of trade-unionism in different environmental contexts and the consequences of such shifts in distributive shares as it may bring about. With these two questions still open, we stand a long distance from an answer to the general query.

# THE INCIDENCE OF COLLECTIVE BARGAINING

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"What difference does it make to a poor man whether he is devoured by a lion or by a hundred rats?"—Voltaire.

## I

The "wages question" of classical political economy can be stated summarily. Can labor organization, by collective bargaining, possibly increase the absolute or relative labor share in the national income? If we take account of the postclassical theories of monopoly and of equilibrium at less than full employment, we may consider that question as having been answered in the affirmative. Labor organization can raise the absolute and the relative remuneration of employed labor, either in a fully competitive economy or in an imperfectly competitive one without labor organization.

The theoretical wages question is now replaced by a statistical wages question: Has collective bargaining in fact increased the absolute or relative labor share in the national income? It is to this statistical question, as it relates to the United States in particular, that I devote the first part of the present paper.

A few caveats are perhaps in order at the outset. First we are concerned only with the distributive effects of collective bargaining proper. We shall leave out of account the distributive effects of restricted immigration, minimum wage legislation, and other measures sponsored by organized labor. We are considering the incidence of union collective bargaining, not the incidence of trade-unionism in its entirety. Second, we shall make the orthodox but questionable assumption that, in the absence of widespread collective bargaining, the distribution of income between labor and capital within a single industry moves in accordance with the elasticity of substitution between labor and capital, as it would do in the purely competitive conditions which certainly do not apply perfectly. This elasticity of substitution appears statistically to be close to unity in manufacturing, or so the researches of Senator Paul Douglas and his co-workers would indicate.[1] (Professor Sumner Slichter believes the long-term elasticity of substitution to be slightly less

[1] The algebraic form of the Cobb-Douglas function implies a unitary value for the elasticity of substitution between labor and capital, whatever may be the values of the statistical coefficients.

than unity in the United States generally.)[2] In a growing economy with an increasing ratio of capital to labor, this would mean a labor share constant over time if we accept the Douglas hypothesis or rising slowly over time if we prefer the Slichter hypothesis. In neither case is there statistical support for any doctrine of increasing misery, or decreasing relative labor share, in the absence of collective bargaining. Only with an elasticity of substitution greater than unity would collective bargaining be required for the maintenance of constancy of the labor share. Finally, if the labor share remains constant within individual segments of the economy, it may be expected to rise gradually for the economy as a whole, due to the rise of the corporate form of business organization and the relative decline of "proprietorship industries" such as agriculture. When a farmer comes to town to work in a factory or an independent grocer becomes a hired manager of one unit in a chain, there is a statistical rise in the labor share and a statistical decline in the proprietary share which has no counterpart in the economic theory of distribution proper.

## II

It was for a time standard practice in conservative business circles to point to the near-constant labor share in the national income as evidence of the over-all futility of business unionism and collective bargaining on the American model. The same conclusion spread to radical circles as well, as proving the need for revolutionary activity. The constancy appeared to hold, whether labor be taken to include salary-earners as well as wage-earners (as in the U.S.) or to include manual labor only (as in Great Britain).[3] We now know, thanks to the research of Professor Phelps Brown for the United Kingdom,[4] that the constancy concealed considerable fluctuations in the relative numbers of wage-earners and in their annual earnings relative to other members of the population, but this is a recent discovery. If the relative share of labor was constant, what strong or strategic unions gained must only be at the

[2] Sumner H. Slichter, *Strong Points and Weak Points in the American Economy* (New York Public Library, 1953), p. 16 f. The authority of Alfred Marshall (*Principles of Economics*, 8th ed., pp. 665, 670) can be cited in support of a similar proposition with regard to the Western world in general, although not (*ibid.*, p. 687) to the America of his day. Some of the differences between the Slichter and Douglas interpretations may be due to Slichter's considering the economy in total, whereas Douglas was concerned with the manufacturing and mining segments almost completely.

[3] This constancy is stressed particularly by Michal Kalecki in his celebrated essay, "The Distribution of the National Income," reprinted in the American Economic Association *Readings in the Theory of Income Distribution* (Blakiston, 1949), pp. 197-217. See particularly the statistical evidence adduced at pp. 198-200 and the long-run forecast of a falling labor share at pp. 210-212.

[4] E. H. Phelps Brown and P. E. Hart, "The Share of Wages in National Income," *Economic Journal*, June, 1952, pp. 253-277.

expense of weaker, less strategic, or unorganized labor and have no effect on the functional distribution of income as a whole. The constant relative share of labor became a twentieth-century statistical equivalent of the nineteenth-century theoretical "wages fund" in opposing labor organization.

But it is high time to reopen the whole argument, because we have available the results of postwar statistical research which covers for the first time the period of unionism's most rapid growth under the aegis of the New Deal. In particular, the share of labor in privately-produced national income (in which fringe benefits are in principle included) has not been constant but has been gradually rising since 1929. The "statistical wages fund" is on the defensive. Using the figures of Burkhead's recent study of privately-produced personal income,[5] the labor share has risen from 58.8 per cent in 1929 to 66.2 per cent in 1950. (If the net income of unincorporated enterprises is treated as labor income, the increase is from 74.8 to 82.3 per cent.) The increase, measured between two periods of prosperity, amounts to 7.5 percentage points in either case.

Also, during the same period, the personal distribution of income has shifted sharply at its peak in the direction of greater equality, although the distribution as a whole does not show so marked an equalitarian trend. The share of the top 5 per cent of individuals in personal income has fallen from 26.36 per cent in 1929 to 17.63 per cent in 1948; that of the top 1 per cent, from 14.65 per cent in 1929 to 8.38 per cent in 1948. This result we owe to the painstaking and intensive research of Professor Simon Kuznets (*Shares of Upper Income Groups in Income and Savings* [National Bureau of Economic Research, 1953], Table 116, pages 582-590).

There has accumulated considerable statistical evidence that, contrary to previous opinion, wages have a more decided upward trend in strongly than in weakly organized industries, particularly during periods of depression or periods of governmental hostility to the claims of labor as a class. Previous studies had lumped high- and low-wage industries together—the former largely unionized and the latter not. They had concluded that the advantage of unionism was limited to its initial period, where perhaps monopsony was being overcome. But the earlier analysis had ignored the tendency of the gap between low- and high-wage occupations to narrow during periods of prosperity, when employment opportunities improve. The newer studies, by Garbarino, Levin-

[5] Jesse Burkhead, "Changes in the Functional Distribution of Income," *Journal of the American Statistical Association*, June, 1953, p. 214 f. See also George J. Schuller, "The Secular Trend in Income Distribution by Type, 1869-1948," *Review of Economics and Statistics*, November, 1953, pp. 302-324.

son, and Ross, have the great merit of treating each wage-rate class separately.[6]

Public opinion has likewise moved to support the proposition, stated flatly in the popular weekly magazine *Time* (July 27, 1953, page 80) that "the growth of organized labor is bringing about a redistribution of U.S. wealth." The current temper has come full circle from the wage fund days of a hundred years ago. From treating collective bargaining as a quasi-criminal aberration, we now endow it with wide powers to shape the distributive system as it will. John Stuart Mill's celebrated dictum has come into its own with a vengeance: "The laws and conditions of the Production of wealth partake of the character of physical truths. There is nothing optional or arbitrary in them. . . . It is not so with the Distribution of wealth. That is a matter of human institution solely."[7] There is at the present more danger of exaggerating than of minimizing the influence of collective bargaining on income distribution.

## III

Closer examination of the statistical evidence, however, casts some doubt on the quantitative importance of collective bargaining in affecting the relative distribution of private income. In each case, many other things were happening at the same time, and it is difficult to isolate the effect of any one of them.

In the case of the rising trend in the labor share, the principal disconcerting factor is the shift in our industrial composition away from, say, agriculture with a relatively low employee share and in favor of manufacturing industry, where the employee share is relatively high. In the *Survey of Current Business* summary for the period 1929-50, it appears from a diagram (presented without its numerical support) that, apart from changed industrial composition, the employee share of income from ordinary business (fringe benefits included in principle) would actually have declined, albeit very slightly, over the period 1929-50.[8] Unless the shift in industrial composition can be ascribed to

[6] Joseph Garbarino, "Theory of Interindustry Wage Structure Variation," *Quarterly Journal of Economics*, May, 1950, pp. 282-305; Harold M. Levinson, *Unionism, Wage Trends, and Income Distribution, 1914-1947* (University of Michigan Press, 1951), Chap. 3, 5; Arthur M. Ross, *Trade Union Wage Policy* (University of California Press, 1953), Chap. 6. (Paul E. Sultan, "Unionism and Wage-Income Ratios," *Review of Economics and Statistics*, February, 1954, pp. 67-73, appeared too late for consultation in the present study.)

[7] *Principles of Political Economy* (Ashley edition; London: Longmans, Green, 1909), p. 199 f.

[8] Edward F. Denison, "Distribution of National Income," *Survey of Current Business*, June, 1952, pp. 16-23. The diagram referred to in the text is at p. 18. The results for 1929-50 also hold approximately for 1929-41, 1929-48, and 1929-49. There are marked discrepancies for the periods 1929-37, 1929-43, and 1929-47. Just as questionable conclusions can be derived from distribution data unless interindustry shifts are considered, questionable conclusions can be derived from comparisons between relative wage movements in unionized and nonunionized industries unless we consider similar shifts in the demand for labor,

collective bargaining, a modified version of the statistical wage fund appears to retain some share of validity. Apart from changes in industrial composition, that is to say, the employee share remains close to constancy regardless of the effects of collective bargaining. (It is, however, possible that fringe benefits are inadequately covered by the statistics presented.)

In Kuznets' study of the declining share of the wealthy in income and savings (*op. cit.*, pages xxxvii f., 40-43) collective bargaining is not mentioned in the brief sections devoted to causation. This proves nothing in itself, and indeed may represent only an oversight. It is joined, however, by an impressive array of alternative causes. For the decade 1939-48, in which the bulk of the change occurred, causes adduced by Kuznets include: increased employment and farm income, both of which benefit primarily lower income groups; interindustry shifts, particularly away from such fields as finance, transportation, and communication; lower interest rates; and higher federal corporate and individual income and profits taxes. Elsewhere in the same volume (*ibid.*, Table 21, page 74 f.), it is interesting to note that the importance of what Kuznets calls "intratype changes," not affecting the functional distribution of income, are statistically more significant than the intertype changes between the major components of the functional distribution of income. If collective bargaining had been a dominant factor, the intertype changes should presumably have loomed larger than they did.

The average worker and the average employer would agree that collective bargaining influences wage rates in an upward direction, but the statistical evidence remains conflicting. Levinson and Ross, for example, with only slight changes in coverage and base dates, obtain from the same BLS data contradictory estimates of the influence of unionism upon earnings in manufacturing for the period since 1933. Both these writers abstract from such divergent wage trends between unionized and nonunionized industries as may have resulted from shifts in taste, technology, and economic institutions unrelated to collective bargaining. Yet Ross supports the union claim, while Levinson denies it for the period as a whole.[9] Garbarino uses statistical analysis to eliminate the effects of differential changes in man-hour productivity, and

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particularly the greater relative increase in the demand for mining, manufacturing, and construction labor as against clerical, white-collar, and service labor. Professor Richard A. Lester's discussion of "The Long-Run Effects of Full Employment" may be cited as an example of a slip at this point, particularly with regard to the statistics presented. (*American Economic Review*, May, 1953, pp. 468-470.)

[9] Compare particularly Ross, *op. cit.*, Table 5 (p. 118 f.) and Levinson, *op. cit.*, Table 13 (p. 61). I am indebted to Professor Levinson for showing me an unpublished manuscript in which he analyzes in detail the discrepancies between his figures and those of Ross. See, also, Sultan, *op. cit.*, for year-by-year comparisons for the period 1929-51, which support the Levinson viewpoint.

ends by agreeing diffidently with Ross and with the man on the street.[10] It should also be remembered that high wages in one industry can and do affect wages in widely different industries within the same geographical area, particularly in periods of labor shortage. The available statistics have not permitted allowance for the influence of union wage rates on nonunion rates across industrial lines, and meanwhile it is apparently true that highly unionized areas are generally high-wage areas and open shop areas generally low-wage areas.[11] It is also difficult to make meaningful comparisons between union and nonunion plants in the same industry. If the two types are far apart, regional factors complicate the picture; if they are close together, the threat of unionization may have affected nonunion plants.

Among the postwar students of unionism and its effect on absolute and relative earnings, Levinson must be classified among the skeptics. In his study of the distributive effects of collective bargaining, he finds no direct encroachment of wages on profits. He does, however, point out a possible indirect distributive effect. During the period 1929-47, he finds, the relative share of property (rent and interest) declined in the industries of his sample. This decline was due to cheap money and other policies outside the purview of collective bargaining. It occurred in his "union group" (manufacturing, construction, mining, and public utilities) as well as his "nonunion group" (agriculture, trade, finance, and services). But whereas in the weakly organized group, the relative losses of the property-owners went as relative gains to entrepreneurs and dividend receivers, in unionized industries the bulk of the relative gains accrued to the labor share (*op. cit.*, Table 25, page 106). Aside from this indirect effect, Levinson sees collective bargaining operating primarily as a defensive factor, maintaining the labor share where it might otherwise have fallen during periods of depression or of price increases. Levinson's income figures are gross of corporate income and profit taxes. Sultan (*op. cit.*, page 71 f.) also analyzes income figures net of these taxes, without revealing major differences beyond a slight over-all risk in the labor share.

In this welter of suggestive evidence, always partial and often contradictory, only the most tentative of conclusions are tenable regarding the effect of collective bargaining on the distribution of income. We must be prepared to abandon them, in particular, whenever new data appear, whenever we obtain better indexes of union strength than mere percentages of membership, or whenever better statistical methods are

[10] Garbarino, *Quarterly Journal of Economics*, *op. cit.*, pp. 300-305. (There is a strong association between degree of organization and degree of industrial concentration, both possible causes for differential wage movements.)

[11] This point I owe to discussion with my colleague and departmental chairman, Professor Edwin E. Witte.

devised for measuring the effect of collective bargaining within single industries or across industrial lines. As matters stand at the present state of the debate, the weight of the evidence seems to suggest some slight tendency for union wage rates to advance ahead of nonunion ones, albeit indirectly at the expense of bondholders and landlords rather than directly at the expense of entrepreneurs and stockholders. We can say with more confidence, first, that the major changes in income distribution over the past generation are ascribable to causes other than collective bargaining and, second, that whatever the incidence and economic effects of collective bargaining may be, changing the aggregate income distribution has been unimportant.

## IV

If collective bargaining has affected income distribution only to the minimal degree suggested immediately above, what has its incidence been? At whose expense, if not the expense of other groups of functional income receivers, have come whatever wage gains achieved through collective bargaining would not have been won in nonunion labor markets? Or have there in fact been no such gains? The remainder of this paper will be taken up with an examination of these questions. Several hypotheses will be considered, and a few preliminary answers suggested here and there.

Quantitatively speaking, the greater part of the money wage gains which unions have made in the past twenty years of collective bargaining would probably have resulted from inflation and labor shortages in a nonunion economy. Our incidence problem is concerned only with the remainder. As we shall see, some writers doubt that there is any remainder. To support our quantitative assertion, it is sufficient to consider the money wage increases which have come about in nonunion or weakly organized industries. Two outstanding examples are farm labor and domestic service; a composite index number of wage rates was 351 in 1948 on a 1939 base and a corresponding index for domestic service was 272.[12] An unweighted average of industry wage rates in wholesale and retail trade, hotels, laundries, and cleaning and dyeing was 245 in September, 1952, on the same 1939 base (Lester, *op. cit.*, page 469). The cases of clerical and professional labor can also be cited. Even teachers have had money wage increases during and since World War II.

Do you remember the fable of Chanticleer, the rooster who believed his crowing made the sun rise? He personifies the fallacy of *post hoc*

[12] Milton Friedman, "Some Comments on the Significance of Labor Unions for Economic Policy," in David McCord Wright (ed.), *The Impact of the Union* (Harcourt, Brace, 1951), pp. 218-224.

*ergo propter hoc*. Many union spokesmen and some economists are in Chanticleer's position as regards collective bargaining and successive rounds of wage increases under conditions of full employment inflation. Wage gains come about through collective bargains; it is a short step to imagine wage gains as coming about because of collective bargains, or making collective bargaining the cause rather than the intermediary in the process.

Professors Friedman, Morton, and particularly Rees have come close to propounding a "Chanticleer" or "illusion" theory of collective bargaining.[13] Strangely enough, a certain number of labor economists appear sympathetic to this position, because it acquits unionism of any blame for price inflation. According to this theory, trade-union members (always excepting Mr. Lewis' miners and, by Friedman's reckoning, other workers to a total of between 10 and 20 per cent of the labor force) gain no more under collective bargaining than they would have gained under individual bargaining. In some cases (steel and automobiles being most frequently cited), they may have gained less. (Because of the greater difficulty in withdrawing temporary wage concessions once they have become frozen in union contracts, concessions were not made to union labor which might have been made to nonunion labor.) There are on balance few or no differential gains from collective bargaining. The incidence problem, even if it does not vanish entirely, is of much smaller magnitude than one intuitively supposes.

## V

Insofar as collective bargaining has a real incidence, which may be only to a minor degree, the major part of this incidence seems to be on workers who are so unfortunate as to find themselves outside of the economically stronger unions which are often not the largest, politically most vocal, or most publicized ones. There is nothing original about this conclusion, which is as old as the wages fund. As to its quantitative significance, Friedman suggests, on what may be a little more than a guesswork basis, that from 80 to 90 per cent of the labor force may have had its wages reduced from 1 to 4 per cent as a result of collective bargaining.[14] Perhaps because the per capita percentage is so small, per-

[13] Friedman, *op. cit.*, pp. 204-234. A rough quantitative conclusion that "probably not over 10 per cent and certainly not over 20 per cent of the labor force can be supposed to have had their wages significantly affected by the existence of unions," is at p. 215. Walter A. Morton, "Trade Unionism, Full Employment, and Inflation," *American Economic Review*, March, 1950, pp. 13-39. Albert E. Rees, "Postwar Wage Determination in the Basic Steel Industry," *American Economic Review*, June, 1951, pp. 389-404; "Wage Levels under Conditions of Long-Run Full Employment," *American Economic Review*, May, 1953, pp. 451-457.

[14] Friedman, *op. cit.*, p. 216. Other participants in this symposium, particularly Professors William H. Chamberlin and J. M. Clark, would doubtless consider Friedman's estimate unduly low. So, of course, would the Henry Simons of "Reflections on Syndicalism," and the C. E. Lindblom of *Unions and Capitalism*.

haps because this pattern of incidence operates so indirectly and invisibly, few union members themselves give it any weight.[15] Occasionally, however, one finds a union leader forthrightly admitting, as Lewis has done in soft coal mining, a preference for a small labor force at high wage rates to a large labor force at lower pay,[16] and ignoring the problems of workers displaced in the process.

The pattern of incidence of collective bargaining upon weakly organized and unorganized workers is important mainly in depressed periods, when it operates primarily through the unemployment of men. In notorious cases, the burden is concentrated on men excluded from the labor market through restrictive union rules of various sorts. The more usual, and less spectacular, method of exclusion is a wage rate held so high as to discourage employment in the craft or industry affected.

In good times, the unemployment is not the visible unemployment of men, but the invisible unemployment of skill. There is unemployment of skill when a would-be printer (with the requisite abilities) is limited to farm labor, or a would-be doctor is limited to high school science teaching, or mechanically gifted hill-billies remain in the hills despite high wages for mechanics in the cities. The result of the unemployment of skill is concentration of labor, and therefore lower wages, in the less desirable occupations. We can accordingly trace the incidence of collective bargaining to the workers in these residual occupations.

The restrictive practices of "closed unionism" are always signs that this pattern of incidence is operative, but there may be unemployment either of men or of skill, with no restrictive practices whatever. If an uneconomically high wage rate is achieved, for example, in a collective bargain including seniority provisions, the fact that workers without seniority are unemployed may be enough to discourage qualified outsiders from entering, with no strong measures by the union to ration whatever opportunities remain available.

If by labor we mean manual workers only, the rise of unionism has coincided with a rise of labor income relative to clerical and supervisory income, which is not reflected in the aggregate statistics for the economy or for individual industries. This might have come about in a competitive labor market, due to immigration restrictions and the spread of secondary education. Or it may possibly represent the most important single pattern of incidence of collective bargaining. Comparative studies of the distribution of employee compensation between manual and

[15] This statement is based on a questionnaire entitled "Who Pays for Wage Increases?" distributed to union members attending summer classes at the University of Wisconsin School for Workers in 1953.

[16] Lewis' direct statement is: "We decided it was better to have a half-million men working in the industry at good wages and high standards of living, than it is to have a million working in the industry in poverty and degradation." Cited by E. R. Wickersham, *Industrial and Labor Relations Review,* July, 1953, p. 601.

other workers in unionized and nonunionized industries or comparative studies of the clerical-manual differential in the two classes of industries, might be highly significant in this connection. By analogy with Strain's unpublished comparative study of skill differentials,[17] I venture the hypothesis that the influence of unionism will be found relatively slight.

Frankness actually compels the admission that direct evidence for the existence, let alone the importance, of incidence on displaced workers and on displaced skills is almost completely lacking. The evidence, if indeed we may call it such, is of a negative and circumstantial character or is confined to individual instances of doubtful probative value. The other types of incidence can be disproved or discounted statistically, leaving this one in the position of residual claimant. Professor Machlup, for example, "proves" incidence on displaced workers deductively and as a pure residual in his *Political Economy of Monopoly*.[18] I can suggest nothing better, and I think Machlup is quite correct in depressed periods. Yet I confess to unease in mind, and wish that he and I had something substantial to offer by way of positive evidence.

Suppose, now, that all unions were as strong as the United Mine Workers, as strategically located in the economic flow, and as restrictive as, say, the Milk Wagon Drivers are accused of being. Would not this pattern of incidence be avoided completely? Andrew Jackson said that the remedy for the abuses of democracy is more democracy. Perhaps the remedy for the abuses of strong unions is more strong unions. Formally, this seems to be true. In our imaginary world of strong unions, no wage rate could be depressed by wage gains made elsewhere. Substantively, however, the argument is false. People would continue to be displaced by restrictively high wage rates. Probably they would be displaced in greater numbers than at present. But instead of retaining their employee status while holding, as at present, less desirable jobs, their alternative (this side of relief) would be restricted to involuntary self-employment. By involuntary self-employment I mean the disguised unemployment of sub-subsistence farming, unprofitable retail trade, and the quasi-mendicant type of salesmanship. The prospect is not pleasant to contemplate. Fortunately, there seems no present need of contemplating it at great length.

[17] Robert E. Strain, "Occupational Wage Differences: Determinants and Recent Trends," unpublished Ph.D. dissertation, Wisconsin, 1953. Strain finds that skill differentials have narrowed as rapidly and to approximately the same extent in industries organized on a craft basis, or largely unorganized, as in industries where industrial or "mass unionism" has been important.

[18] Fritz Machlup, *op. cit.* (Johns Hopkins, 1952), p. 407. The best-known recent statement of the "displaced worker" theory of incidence is likewise deductive. Henry Simons, *Economic Policy for a Free Society* (University of Chicago, 1948), pp. 130 f., 143.

## VI

Third in importance among patterns of incidence but still appreciably significant, I should list incidence on consumers through higher prices, including as a subhead incidence on taxpayers in higher taxes (in the cases of public contract work). The discussion which follows will be even more controversial than that which has gone before. For popular thinking, including labor thinking as well (I refer again to the questionnaire study cited in footnote 15), sees wage increases operating primarily as steps to price and tax increases and the consumer or taxpayer as the immediate and ultimate payer of all massive wage increases in advance of productivity. Many economists, too, think in terms of the London *Economist's* "Uneasy Triangle" (propounded in the U. S. by the late C. O. Hardy well in advance of its popularization abroad), involving incompatibility between full employment, strong unions, and price stability. (This case was made most strongly by Lindblom in *Unions and Capitalism.*) Reacting against this view have been such writers as Friedman, Morton, and Rees, who insist with equal vigor, as we have seen, on treating collective bargaining only as an intermediary for wage increases caused by monetary, credit, and fiscal policy. They can point to wage movements in unorganized sectors of the economy in support of their case.

My position is a compromise, which will satisfy zealots on neither side. Since it lacks the support of empirical evidence, it is expressed only with the timidity that becomes a minority view. The weight of the empirical argument is on the side of Friedman and company, but it seems fairly evident that some commodities—coal and munitions, for example—present special cases. Here there is an insistent and inelastic short-run demand for the final product, so that wage increases are easily passed through to prices and taxes and need not wait for full employment.[19] In some "key bargains," employers apparently act in tacit collusion with unions to break price lines or wage stabilization schemes, as in bituminous coal in 1952.[20] Less important are the cases in which the

[19] If the total volume of spending in the economy is constant, a price increase in a commodity with inelastic demand (such as coal) reduces expenditure on other commodities and therefore incomes in the corresponding industries. Insofar as this reduction in income takes the form of lower prices, the net incidence upon consumers is reduced. If the entire reduction takes this form, there will be no net incidence on consumers. Insofar as the reduction in income takes the form of decreased employment, the incidence is only partially on consumers of coal and partly on owners of the unemployed resources. (This emendation I owe to my colleague Jacob A. Stockfisch, on the analogy of his own work in tax shifting and incidence.) For the consequences of dropping the assumption of constant total spending, see the next paragraph.

[20] The Northern mine operators' Chief Bargainer Harry Moses, quoted in *Time*, August 17, 1953, p. 80, puts the matter in reverse: "With any moderate reduction in the wage scale, the customer would soon have all the saving."

union actually takes the initiative in forcing a price increase through a rise in wages.[21]

It is certainly possible for large increases won by collective bargaining to have indirect expansionary effects on the supply of money and credit, and hence on prices. If unions continue to grow in size, in political power, and in unconcern for the elementary facts of monetary economics, this danger may be greater in the future than it has been in the past. At times, the monetary expansion I have in mind may be government spending, undertaken deliberately to avoid any significant unemployment following wage increases.[22] Caused by political pressure, this effect transcends our study of collective bargaining proper. In addition, increased wage bills always embarrass some employers as to liquid assets, which they can and do replenish by increasing their credit accommodations at the commercial banks. The quantitative significance of this factor is difficult to estimate, since the motives for increased credit requirement are multiple and do not disentangle readily. (Furthermore, I do not have Friedman to lean upon in this connection.) My suspicion is that the point is minor, but worth listing in this subordinate position.

When collective bargaining decreases employment by raising wages, without any monetary consequences, part of the incidence falls upon consumers although the bulk of it is borne by the workers displaced. In terms of the familiar Fisher equation of exchange, decreased employment means a fall in $T$, which leads to a higher $P$ when the monetary circulation $MV$ is constant. This pattern of incidence is secondary to and dependent upon the pattern of incidence on displaced workers through decreased employment, but it too seems to be important in depressed periods.

[21] Dunlop cites a prewar case, involving the Ball Brothers Company and the Glass Bottle Blowers' Association, in which a union representative in the wage negotiations argued: "This year it is time to increase prices. Maybe the only way you will make a move to increase prices is by us stepping on the accelerator in the way of requesting increase in wage." John T. Dunlop, *Wage Determination Under Trade Unions* (Oxford: Blackwell, 1950), p. 97.

[22] Cf. Arthur Smithies: "If prices and wages were sufficiently flexible, there would be much to be said for stabilizing total money income and allowing prices and wages in individual industries to find their own levels. But with modern rigidities and modern group behavior, is it realistic to suppose that this can be done? With stable money incomes, a new round of wage increases would mean unemployment that would only be cured with a general wage decrease . . . I cannot conceive that any government that depends heavily on labor support—as all governments do—would have the strength of purpose or even the desire to allow it to be carried out." "The American Economic Association Committee Report on Economic Instability," *American Economic Review,* May, 1951, p. 185 f. Morton (*op. cit.*, p. 26) has christened as "Lewis' Law" the alleged propensity of the stronger unions to demand and secure wage increases so large as to lead to unemployment, inflation, or both.

## VII

Thus far we have ignored the fact of economic growth. Growth has in the past permitted absolute gains to labor, including gains won through collective bargaining, to be combined with absolute gains to most other principal economic groups. The more rapid the rate of growth in the economy, the easier it is for all groups to make absolute gains simultaneously. The question should, however, be asked whether the growth rate has been retarded by the rise of collective bargaining. If it has, the retardation may constitute another pattern of incidence.

Professor David McCord Wright (see his contribution in *The Impact of the Union,* Chapters 12 and 13) is outstanding among American economists who see in collective bargaining, along with progressive taxation and equalitarianism generally, a threat to innovation and progress. His case against collective bargaining does not rest upon individual horror stories of feather bedding and made-work, but rather on the ability of strong unions to take the profit out of innovation through wage pressure. There are undoubtedly cases supporting his position.

But in direct contradiction to the pessimism of Wright, "unions have frequently been pointed to as the goads of increasing efficiency, and thus, while demanding a greater share of income, they are said to constitute a driving force toward increases in productivity and the absolute level of income."[23] Most of this case is the so-called "shock effect"—the forcing of managerial efficiency by constant wage pressure. Part is direct aid by unions to plants adopting innovations; the garment trades furnish the favorite examples here. Also important is the reconciliation of labor to innovation, by safeguarding jobs during transition periods and by assuring labor of a greater share in the gains of increased productivity than workers expect market adjustments to provide. There are likewise cases to support this outlook. Certainly labor's acquiescence in innovation (outside problem areas like residential construction) constantly impresses European visitors, who come to study American industrial techniques and productivity under the various foreign aid programs.

At bottom, the issue between the optimists and the pessimists is purely quantitative. Both trains of causation go on all the time, but which one dominates? I do not know of any evidence yet available for a broad enough body of industry over a long enough period to swing the balance one way or the other. I should expect personnel managers or employer representatives to support much of Wright's position and

[23] For a recent brief restatement, see Edwin E. Witte, "The Role of Unions in Contemporary Society," *Industrial and Labor Relations Review*, October, 1950, pp. 12-14.

union representatives to disagree. Professional students of industrial relations likewise tend, by and large, to disagree with Wright's pessimism, since in fact the rise of unionism has not been associated with any fall in the rate of increase of productivity in American industry. Garbarino, however, has found no significant correlation in either direction between union strength and the rate of increase in man-hour productivity (in personal correspondence with the present writer). It is clear that organized labor often has an interest in efficient use of capital and raw materials, balanced at times by a disinterest in efficient use of direct labor. Pending further study, there seems no alternative to leaving the issue open and considering the rival viewpoints as plausible but unproved.

## VIII

Some reference must be made as well to the underconsumption doctrine, particularly the variety propounded over the years by John A. Hobson and his disciples. Translated into our terminology of incidence, the Hobsonian position is that collective bargaining has no net cost, or a negative net cost because it increases mass purchasing power and therefore the level of output and employment, from which all classes benefit. Some form of this doctrine has been part of American labor ideology for generations. (Employers, too, are not always immune, as witness Henry Ford.)[24] Known as "the economy of high wages," the view continues as a common component of workers' answers to questions about costs of unionism, collective bargaining, and wage increases.

This is not the place to reconsider the validity of maldistributionist underconsumption as an economic theory, although it deserves a new full-dress theoretical analysis. I should like to note only that the underconsumption position in connection with collective bargaining is hypothetical and therefore derivative. If collective bargaining has altered the income distribution in favor of labor, then it is supposedly costless. If collective bargaining has not altered this distribution, then underconsumption, whether true or false, does not apply.[25] And, of course, underconsumption theories tell us nothing about whether or not collective bargaining actually alters distribution.

Underconsumption, as a pattern of incidence or rather of non-incidence, requires, to be relevant, some outside evidence that collective

[24] Ford's "economy of high wages" as proposed in 1914 did not call for collective bargaining as a means of achieving these high wages.

[25] Mr. Richard Givens, a graduate student at Wisconsin, has formulated the hypothesis that collective bargaining lowers the standard deviation of the labor share while not affecting its mean. In particular, he believes, collective bargaining may check the fall of the labor share during periods of prosperity. If this hypothesis is correct, collective bargaining may increase consumption and reduce the amplitude of economic fluctuations without increasing the mean labor share. The statement in the text must therefore be modified.

bargaining as carried on at present (and not merely in some ideal world where wage increases are paid out of profits) has actually affected the distribution of income in some material degree. This evidence, I submit, is almost completely lacking, and for that reason I propose to end our discussion of underconsumption without considering its hypothetical implications for a different kind of world with a different kind of collective bargaining.

## IX

If I may summarize conclusions both personal and provisional, collective bargaining seems to have had two main patterns of incidence, not one. Neither of the two has affected to any great degree either the functional or the personal distribution of income. In good times, collective bargaining has gained organized workers little more in real wages than they would have achieved on an unorganized labor market. Here I am following Friedman, Morton, and Rees, who generalize from the overriding postwar boom of the period since 1945. In bad times unions have made, or retained, substantial gains, but these have come mainly at the expense of the remainder of the working population and of the consuming public, not of employers and "capitalists." Here I am following Simons, Lindblom, and Machlup, who generalize from the "hungry thirties."

What has held in the past may of course not hold in the future. A coming step in the evolution of American labor organization may be greater concern with the incidence of collective bargaining, and perhaps positive action by unions or by government to insure that collective bargaining shall in fact shift the income distribution in favor of labor. But this is pure crystal-gazing, with neither deductive nor statistical reasoning to support it.

It is standard practice to end inconclusive disquisitions like this one with apologies for the state of one's ignorance and for having relied too heavily on preconception and prejudice as substitutes for knowledge. This is not only standard practice but desirable practice. I shall follow it here, with the added emphasis of one of Professor Boulding's little essays in poetical economy, which has special reference to our problem:

> If workers, low paid, seek to better their lot
> By grabbing some dough from the rich,
> It means jobs for more workers—or else it does not,
> I cannot be positive which.

# COLLECTIVE BARGAINING AND INCOME DISTRIBUTION

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In this paper, I propose to deal with two aspects of the question under discussion: first, to analyze in some detail the available statistical evidence regarding the effects of collective bargaining on the functional distribution of income[1] and, second, to indicate what I consider to be two or three of the major theoretical implications of the empirical evidence.

There have been a number of studies made within the past few years analyzing the factors affecting the share of income going to labor.[2] Virtually all of these studies have dealt with the problem in the aggregate; that is, in terms of total wages (or wages and salaries) as a proportion of total national income. The use of such aggregate data for the purpose of evaluating the influence of collective bargaining, however, is clearly subject to at least three serious objections. Perhaps the most basic stems from the fact that total labor income includes a very much broader category of income recipients than organized labor. So far as the United States is concerned, probably well above half of "employee compensation" represents income received by nonunion production workers, secretarial and professional groups, and corporate management. A second problem arises from the fact that aggregate figures may be affected, not only by changes in the distribution of income within firms or industries, but also by changes over time in the importance of different industries in the economy. Finally, over-all figures often include important economic units, such as government, whose activities and motivations are not meaningful for the problem at hand.

In order to obtain a closer evalution of the influence of collective bargaining, therefore, the available distribution data for the period

[1] It is perhaps worth noting explicitly that we are concerned here only with the direct potentialities and limitations of collective bargaining, leaving aside the possible effects of political pressures. Furthermore, the analysis is confined to the distribution of the available real goods and services, which ignores the very important, though less tangible, gains to labor which have come from the introduction of greater personal dignity, rights, and security in the modern industrial environment.

[2] See, for example, Michal Kalecki, "The Distribution of the National Income," reprinted in *Readings in the Theory of Income Distribution* (Blakiston Company, 1946), pp. 197-217; International Labour Conference, Report VI (a), *Wages (a) General Report* (Geneva: International Labour Office, 1948), pp. 57-70; E. H. Phelps Brown and P. E. Hart, "The Share of Wages in National Income," *Economic Journal*, June, 1952, pp. 253-277; and Harold M. Levinson, *Unionism, Wage Trends, and Income Distribution* (University of Michigan Press, 1951).

TABLE 1

INTRAINDUSTRY AND INTERINDUSTRY REDISTRIBUTION OF PRIVATE NATIONAL INCOME, CLASSIFIED BY "UNION" AND "NONUNION" INDUSTRIES, 1929–52

| Type of Income Payment | Per Cent of Income Originating 1929 | Per Cent of Income Originating 1952 | Interindustry Shifts | Intraindustry Shifts | Total Shifts | Percentage Changes |
|---|---|---|---|---|---|---|
| | Union Industries | | | | | |
| Employee compensation | 34.0% | 39.5% | +4.0 | +1.5 | +5.5 | +16.2% |
| Unincorporated income | 2.2 | 2.2 | +0.5 | −0.5 | 0 | +13.0 |
| Corporate profit | 10.1 | 11.7 | +1.9 | −0.3 | +1.6 | |
| Interest | 1.2 | 0.4 | −0.1 | −0.7 | −0.8 | −66.7 |
| Rent | 0 | 0 | 0 | 0 | 0 | |
| Total | 47.5% | 53.8% | +6.3 | — | +6.3 | |
| | Nonunion Industries | | | | | |
| Employee compensation | 21.6% | 21.9 | +0.3 | 0 | +0.3 | +1.4% |
| Unincorporated income | 15.8 | 14.4 | −1.7 | +0.3 | −1.4 | −0.5 |
| Corporate profit | 3.0 | 4.3 | −0.4 | +1.7 | +1.3 | |
| Interest | 4.5 | 1.5 | −1.2 | −1.8 | −3.0 | −53.7 |
| Rent | 7.6 | 4.1 | −3.3 | −0.2 | −3.5 | |
| Total | 52.5% | 46.2% | −6.3 | — | −6.3 | |
| | All Industries | | | | | |
| Employee compensation | 55.6% | 61.4 | +4.3 | +1.5 | +5.8 | +10.4 |
| Unincorporated income | 18.0 | 16.6 | −1.2 | −0.2 | −1.4 | +4.8 |
| Corporate profit | 13.1 | 16.0 | +1.5 | +1.4 | +2.9 | |
| Interest | 5.7 | 1.9 | −1.3 | −2.5 | −3.8 | −54.9 |
| Rent | 7.6 | 4.1 | −3.3 | −0.2 | −3.5 | |
| Total | 100.0% | 100.0% | — | — | — | |

1929-52 were recomputed with the introduction of three correction factors.[3] First, the activities of the government, of nonprofit institutions, and of private households were eliminated. Second, income shifts within industries (intraindustry shifts) were separated from those caused by shifts in the importance of different industries in the economy (interindustry shifts).[4] Finally, both types of shifts were further broken

[3] The basic data were obtained from U.S. Department of Commerce, *National Income, 1951 Edition*, and *Survey of Current Business*, July, 1953, Tables 13-23.

[4] This was done by recomputing the distribution of income in 1952, using the actual 1952 pattern of distribution in each separate industrial group but assuming that the per cent of total private national income represented by each industrial group was the same in 1952 as it had been in 1929. The resulting figures would reflect only intraindustry shifts. By subtracting these from the total shifts which occurred over the period, a close approximation was obtained of the interindustry redistribution effects.

down into those which occurred in the union sector of the economy, consisting of manufacturing, mining, construction, transportation, and utilities; and those which occurred in the nonunion sector, made up of agriculture, retail and wholesale trade, services, and finance. While this last type of breakdown does not provide as close a measure of the income going to unionized labor as one would prefer, nevertheless close to 100 per cent of organized strength lies in the union sector. Consequently, it may reasonably be expected that the redistributive effects of collective bargaining, if any, would be more significant in that area.[5]

The results of these adjustments are presented in Table 1. Considering the entire private sector of the economy as a unit, the pattern of redistribution which emerges is a familiar one. Over the period 1929-52, employee compensation has risen approximately 6 percentage points; entrepreneurial incomes before taxes (including corporate profits and unincorporated income) have risen 1.5 percentage points; while the resulting loss was, of course, suffered entirely by the rent and interest shares.[6] A closer analysis of these over-all changes indicates that practically all of the shifts toward labor and profits have accrued to the benefit of the union sector, while the share of income going to nonunion labor and profits has remained virtually unchanged. As compared to their respective shares in 1929, the gain to union labor represented a rise of 16 per cent,[7] while the shift toward union profits represented a rise of 13 per cent. On the other hand, the loss to the rentier class has been very largely concentrated in the nonunion sector. Finally, a further breakdown of the data into interindustry and intraindustry shifts shows that three-fourths or more of these income transfers were of the interindustry type; that is, they were due to an increase in the importance of union industries in the economy rather than to any redistribution within the union sector itself.

Turning first to these interindustry shifts, therefore, we are faced with the question of whether they can be attributed primarily or in part

[5] A closer measure of union influence was attempted by excluding from the union sector such industries as textiles, food, and a few others where unionism is still considered to be quite weak. The distribution pattern in these industries was similar to others in the union sector, however, so that they were retained in that group. It is also possible to introduce a fourth correction factor by excluding from total employee compensation the compensation of corporate officers, which is made available separately by the Department of Commerce. The figure for any given year is not published until three years later, however, so that no correction was possible for 1952.

[6] Employee compensation includes employer contributions for social insurance, workmen's compensation, and private pension and welfare funds. Entrepreneurial incomes were adjusted for changes in inventory valuation.

[7] In fact, the increase in the share of production workers in the union sector was probably somewhat greater, since these figures include a large portion of the compensation of corporate executives, whose share of total private income had declined 0.8 percentage points from 1929 to 1949, the last year for which data were available. Some portion of this drop may well have been recovered by 1952, however, particularly in view of the wide adoption of stock purchase plans and other indirect techniques of executive compensation.

to collective bargaining pressure. On this issue, it seems to me beyond doubt that the basic factor which has permitted a shift of this magnitude to occur has been, rather, the government's policy of maintaining artificially low interest rates and rents. In view of the prevalence of strong upward pressure on these factors over the past decade, it is very probable that in the absence of such controls the rent share would at least have been maintained, while the interest share would most certainly have dropped by much less.[8]

Government action of this sort, however, while a necessary condition, was not in itself sufficient to explain the redistribution which occurred. Given such a government policy, both the amount and direction of the redistribution resulting from it would then be a function of the degree of price and/or wage inflation. It is in this latter respect, therefore, that collective bargaining may still have been an important cause of the interindustry shifts toward the union sector by bringing about a greater rise in the wage level of organized labor than would otherwise have occurred.

As you know, the evidence in this connection is extremely difficult to evaluate. There is certainly no question that a very large portion of the war and postwar inflation would have occurred in any case. Furthermore, it is quite possible that the major direction of demand was concentrated in the union sector of the economy, thereby exerting a greater pull on union prices and wages than on nonunion, quite independently of collective bargaining.

Nevertheless, I believe that collective bargaining has been a factor in obtaining for workers in the union sector of the economy greater wage increases than can be explained solely by the demand side of the market. During the latter half of the thirties, for example, when demand factors were still largely inoperative, the available data strongly suggest that workers in the union sector did obtain an important wage advantage. The figures in Table 2 indicate that from 1934 to 1941, the average increase in hourly earnings for industries in the union sector was approximately 30 per cent as compared to an average increase of only 20 per cent in the nonunion sector; from 1941 to 1952, union earnings rose another 130 per cent; nonunion, 120 per cent. Furthermore, these nonunion increases were greatly affected by the inclusion of agriculture in which the extraordinarily low absolute level of earnings in 1934 introduced a strong upward bias percentagewise. Considering the entire 1934-52 period, the increase in the union sector exceeded that in the nonunion sector, including agriculture, by 15 per cent; if agriculture

[8] One may hold the position, of course, that these government policies were not independent of union political pressure. This issue is beyond the scope of the present analysis, however.

is excluded, the union advantage becomes approximately 35 per cent.[9] On this basis, it seems to me that at least some part of the interindustry shifts away from rent and interest toward organized labor may be attributed to the strength of unionism.

The view that these union-nonunion earnings differentials cannot be explained entirely by demand factors is also given support by the differences in the intraindustry shifts which have occurred, although the mag-

TABLE 2

AVERAGE HOURLY EARNINGS IN SELECTED INDUSTRIES, 1934–52

| | Average Hourly Earnings | | | Percentage Increase | | |
|---|---|---|---|---|---|---|
| | 1934 | 1941 | 1952 | 1934–41 | 1941–52 | 1934–52 |
| | Union Sector Industries | | | | | |
| *All Manufacturing* | $0.53 | $0.73 | $1.67 | 35% | 129% | 215% |
| *Mining* | | | | | | |
| Anthracite | .83 | .97 | 2.26 | 17 | 133 | 172 |
| Bituminous coal | .67 | .99 | 2.29 | 48 | 131 | 242 |
| Quarrying and nonmetallic mining | .47 | .63 | 1.58 | 34 | 151 | 236 |
| *Utilities* | | | | | | |
| Electric light and power | .78 | .92 | 1.84 | 18 | 100 | 136 |
| Class I railroads | .60 | .75 | 1.83 | 25 | 144 | 205 |
| Street railways and busses | .60 | .75 | 1.65 | 25 | 120 | 175 |
| *Construction* | .80 | 1.01 | 2.31 | 26 | 129 | 189 |
| Average increase (unweighted) | | | | 29% | 130% | 196% |
| | Nonunion Sector Industries | | | | | |
| *Trade* | | | | | | |
| Wholesale trade | $0.65* | $0.79 | $1.67 | 22+% | 111% | 157+% |
| Retail trade | .53 | .57 | 1.32 | 8 | 132 | 149 |
| *Services* | | | | | | |
| Hotel (year-round) | .27 | .35 | .87 | 30 | 149 | 222 |
| Power laundries | .38 | .44 | .94 | 16 | 114 | 147 |
| Cleaning and dyeing | .44 | .51 | 1.10 | 16 | 116 | 150 |
| *Finance* | | | | | | |
| Security brokerage | 35.34† | 39.14† | 81.07† | 11 | 107 | 129 |
| Insurance | 35.02† | 37.54† | 63.38† | 7 | 69 | 81 |
| *Agriculture* | 1.26‡ | 1.93‡ | 5.40‡, § | 53 | 180 | 329+ |
| Average increase (unweighted) | | | | 20% | 122% | 171% |
| Average increase, exclusive of agriculture | | | | 16 | 114 | 148 |

SOURCE: Bureau of Labor Statistics.
* 1935 figure; 1934 not available.
† Weekly.
‡ Per day without board.
§ 1948 figure; data after 1948 not comparable.

[9] In my opinion, differentials of this type have not arisen, however, as between union and nonunion production workers within the manufacturing, construction, utilities, and mining sectors of the economy. For a discussion of these trends, see H. M. Levinson, *op. cit.*, Chap. III.

nitudes involved are much smaller. In both sectors the fixed income recipients have lost ground, a shift largely made possible, as already noted, by the nature of government policies. In the union sector, however, the entire gain from these shares has accrued to labor, plus an additional small amount from profits. By contrast, the entire transfer away from rent and interest in the unorganized sector went to entrepreneurial returns, with labor's share unchanged. If both price and wage increases were purely a demand phenomenon, there would be no reason for expecting the pattern of intraindustry shifts to favor labor in the union and profits in the nonunion sectors. Rather, the data suggest that, aside from wage increases which were absorbed by increases in productivity, bargaining pressure has been successful in raising money wages at least as rapidly as the prices of union-made goods, whereas wages have lagged somewhat behind prices in the nonunion industries. The conclusion is again suggested, therefore, that the intraindustry transfers toward organized labor, though small, may also be attributed to unionism.

So far as the redistribution toward labor out of the rent and interest shares is concerned, therefore, it seems to me that the basic causal factor has been government policy, in the absence of which the amount of redistribution would have been very much less, if indeed any would have occurred at all. Given that policy, however, collective bargaining has obtained for organized labor a greater share of these incomes than would otherwise have been the case.

The most significant aspect of the data, however, lies in the fact that the share going to profits in the union sector has remained virtually unaffected, despite a fivefold rise in the strength of unionism and a threefold rise in money wage rates. Aside from its importance as an aspect of the immediate question involved, it seems to me that it also casts a good deal of light on various other issues which have been debated at some length in recent years.

In the first place, it provides much insight into the issue of employer motivation. A considerable amount of criticism has been directed in recent years, in connection with the marginalist controversy, against the assumption of profit-maximizing behavior. It has been pointed out that many employers may be satisfied with what they consider to be a "reasonable" return on their capital; that they are concerned with such other objectives as a desire for power, for community respect, for maintaining the morale and allegiance of their employees; that corporate management, as distinct from corporate stockholders, have wide discretion in their wage-price policies, subject only to keeping the stockholders reasonably happy; and so forth. While these critics have carefully stated that profits are one element in the picture, a conclusion often

drawn has been that the presence of so many alternative motivations makes it quite unsafe to generalize regarding the relationship between bargained wage increases and subsequent price increases.

That such alternative motivations exist cannot be questioned; that they are of sufficient importance and sufficiently widespread as to cast serious doubt on the extent to which wage increases which exceed rises in productivity will in fact be translated into price increases is, however, a very much more dubious proposition. The fact that extensive wage increases have been introduced over the past quarter-century, in many industries having many differing characteristics, and in periods of depression as well as overemployment, without yielding any significant reduction in the profit share, indicates strongly that these alternative motivations are not of great importance.

The existence of a close wage-price relationship does not, of course, necessarily indicate the existence of profit-maximizing behavior, nor by the same token does it necessarily support the marginalist doctrine. The constancy of the profit share does, however, indicate the existence of a sufficiently powerful profit-oriented behavior that other motivations become clearly subordinate. In my own opinion, the constancy of the profit share suggests that certain structural rigidities are "built in" to the system, largely through the widespread use of various types of cost-plus-markup or traditional cost-price formulas as a basis for price determination. What little evidence we have regarding pricing practices indicates that this approach is quite common, though practically nothing is known of how such formulas came into being. Their use, however, offers an explanation of the constancy of the profit share and of a close wage-price relationship without recourse to assumptions of profit-maximizing behavior or (what is the same thing) marginalism.

If marginalism is taken as the frame of reference, however, the failure of wage increases to reduce profits also indicates that the two major market situations under which wage increases would come at the expense of profits—monopsony and a kinked demand curve—have not in fact been particularly widespread. Actually, the possibilities of the latter case have always been largely illusory, since the presence of a kinked demand curve depends upon the existence of uncertainty in each producer's mind as to the course of action which will be followed by his competitors. The very spread of collective bargaining itself, however, removes virtually the entire basis of this uncertainty and, with it, the discontinuity in the marginal productivity schedule.

In another context, Professor Ross has suggested that the loose relationship alleged to exist between wages and prices is one reason causing union leaders—at least in most instances—to disregard the possible

price-employment reactions to their wage demands.[10] While Professor Ross may be right in his analysis of union leaders' attitudes, it may be noted that much of the evidence he advances focuses on the point that the cost effects of a wage change may be offset by a change in the volume of operations, thus leaving the final effect on average labor costs, and hence presumably on prices, indeterminate. Producers' price policies, however, need not be related to average labor costs. I would, in fact, advance as an alternative hypothesis that prices are in many instances determined by the application of a (more or less) traditional markup over marginal costs, which available evidence indicates are substantially constant over a wide range of outputs up to the capacity of the plant.[11] If this hypothesis is correct, overhead charges, including fixed labor factors, are largely ignored in the pricing process. Consequently, a given change in wage rates would, in the absence of productivity changes, yield a direct price change, quite independently of fairly large short-run variations in the volume of operations.

I would like to turn finally to a brief consideration of the view often expressed that in the absence of unionism, labor's share would have declined. As a short-run phenomenon during a period of rapidly rising prices, this is a possibility. It has often been suggested, however, that a more permanent drop in labor's share would normally be expected because of the great rise in the amount of capital invested per worker.[12] There is, however, no necessary relationship whatever between a rise in the amount of capital per worker and labor's share. If the increased use of capital represents a substitution of capital for labor, as in the case of laborsaving devices, it is true that a redistribution of income from labor to capital would be the normal result. If, however, the increase is caused by an expansion of productive capacity, largely involving a duplication of existing facilities, the marginal productivity of labor would rise, that of capital would fall, and a redistribution toward labor would result. Since 1929, both of these developments have occurred. To my knowledge, there is no evidence nor are there any a priori grounds for believing that the former tendency has been any stronger than the latter over the past two decades. Nor am I aware of any evidence that other basic trends have been developing, such as an

[10] Arthur M. Ross, *Trade Union Wage Policy* (University of California Press, 1948), Chap. IV, especially pp. 80-94.

[11] See especially the studies of Yntema, Ezekiel and Wylie, and Dean, whose studies are summarized in Hans Staehle, "Statistical Cost Functions: Appraisal of Recent Contributions," *American Economic Review*, June, 1942, pp. 320-333. See also, R. L. Hall and C. J. Hitch, "Price Theory and Business Behaviour," *Oxford Economic Papers*, May, 1939, pp. 12-45.

[12] See, for example, E. E. Witte, "Role of the Unions in Contemporary Society," *Industrial and Labor Relations Review*, October, 1950, p. 11, and G. F. Bloom and N. Belfer, "Unions and Real Labor Income," *Southern Economic Journal*, January, 1948, pp. 295-296.

increase in the "degree of monopoly," which would suggest a drop in labor's share. The best-defined secular tendency, in fact, has been a shift toward labor out of entreprenueurial income due to the change from the unincorporated to the corporate form of business organization.[13]

What, then, may be said regarding the potentialities and limitations in the use of collective economic power in varying the compensation of labor and capital? My own opinion is that despite all the qualifications and ramifications of modern economic theory and despite a more detailed analysis of the available statistical data, the fundamental conclusions (though not necessarily the procedures) of the marginal productivity theory still prevail. While collective economic power may be effective in raising the price of labor, the potentialities of redistribution out of profits are very slight so long as producers remain free to adjust their prices, techniques, and employment so as to protect their profit position. The possibilities of gains at the expense of the rentier class may be somewhat greater in the short run through the redistributive effects of wage-price inflation. Over a longer period, however, these gains are also sharply limited by the natural operations of market forces and must be supplemented by government controls if they are to be retained.

[13] See R. A. Lester, *Economics of Labor* (Macmillan Company, 1941), pp. 219-221.

## DISCUSSION

JOHN P. TROXELL: Assigning three able ploughmen to the task of cultivating one field would usually be a wasteful business. But in this case, the harvest justifies the assignment. The field has been thoroughly ploughed and harrowed. The findings of our three researchers, while not greatly at variance, yield enough variety to provoke thought in ample measure.

All three find, as their co-workers have found, that the data on national income show surprisingly little influence on the part of collective bargaining, insofar as the distributive shares are concerned.

Levinson finds a tendency for labor's share to rise slightly in the industry groups which are rather well unionized, while no such rise in labor's share seems to have occurred, on the average, in certain parts of the economy wherein unionism is weak. The comparison is between 1929 and 1952 in each case and of course involves extracting (so far as possible) the effect of inter-industry shifts which account for most of the apparent rise in labor's share of national income during the period.

Bronfenbrenner gives hesitant support to Levinson's conclusion that the shifts toward labor's share may be attributed to the strength of unionism.

Kerr dissents. He can find no significant relationship between degree of unionization and labor's share, when industry-by-industry comparisons are made for 1929 as against 1951. Since he and his colleagues have doubtless worked upon the same data as Levinson has used, there is need for cross-examination as to the statistical methods utilized. Is it no more than a matter of differing terminal years? If so, we are on thin ice. We must depend upon 1929 as our starting point, so far as governmental data on national income are concerned; it was a turbulent year of many crosscurrents. We could wish for a better bench-mark year. The years immediately following were even less representative. Yet in 1930, employee compensation constituted precisely the same percentage of private national income as in 1948 (fringe benefits included) according to Department of Commerce figures—a telling example of the hazard lurking in the use of data unadjusted for changed industrial composition.

The constancy of the employee compensation share of national income (after adjustment) is noteworthy, considering the several influences which might be expected to alter it over the years. It would be easy to say that its very magnitude is an important factor in this constancy; so huge an aggregate can absorb a number of influences without showing much effect from any except those of depression or war. More important, in all likelihood, is the fact that some influences work in one direction, some in the other direction. Laborsaving innovations might be expected to tend toward the lessening of labor's share; collective bargaining, to enhance that share. Other influences might be similarly paired. But statistical proof is hard to come by.

It may be that the most pervasive influence of all is the persistent rise in productivity. A good case can be made for the hypothesis that real wages and

productivity rise together, not in perfect correlation, but on the average and in the course of time. If so, steadiness of the labor share is to be expected, except as structural changes in the economy bring the changes with which we are familiar; for example, the very substantial rise in the governmental pay rolls since 1929.

The labor movement might be heard to say that it is no small achievement to have maintained labor's share unchanged, while the amount of invested capital per employee has risen. The layman is apt to discount the economist's argument that the elasticity of substitution between capital and labor is the critical factor in this matter and that (to use Bronfenbrenner's phrasing) only with an elasticity of substitution greater than unity would collective bargaining be required for maintaining labor's share constant. Indeed, it may be guessed that most unionists would be surprised at the findings of the research reported upon in these papers. If they have thought of the issue at all, they have probably believed that the great rise in capital per worker has brought enhancement to property's share of total income, and that labor's cut of the pie has grown relatively smaller through the years, despite the obvious increase in its absolute magnitude. The latter is the thing that really matters to the members of unions, and probably few labor leaders are concerned with what happens to aggregate proportionate shares.

To Clark Kerr we are indebted for an ingenious and most interesting endeavor to show the possible varieties of influences which different kinds and degrees of union pressures may bring to bear on the way income is divided. His conclusions are reached by inductive reasoning, statistical proof being perhaps impossible, our data being what they are. One or two of his observations may be oversimplified; e.g., that a full employment economy will show a lower average share for labor than one wherein depression alternates with boom. Likewise with his conclusion that only by a direct and conscious approach to the problem of distributive shares can unionism achieve a higher relative share for labor. As to the latter point, it may be granted that the employer may avoid being "caught" by rising wage levels. But if he eludes escape by raising prices and if this process continues indefinitely and free of countervailing influences, surely there will be changes in the way income is distributed, unintended though such a result may have been.

Philip Taft: Dr. Levinson's paper leads to one conclusion: a highly organized labor market is not inevitably a deterrent to the operations of free enterprise economy. Consequently the fears that unionism would destroy the free price system seems to be largely exaggerated and based upon a priori thinking. Dr. Levinson's arguments and conclusions are stated with such sweet reasonableness and not without proof or cogency that one hates to argue against them. Yet the job of a commentator is to discover weaknesses and omissions in the presentation.

As I read his paper and listened to Dr. Kerr, the assumption is that there is a given share that is due, at least historically, to profits and irrespective of changes in techniques and in the capital fund, this ratio of profits to total na-

tional income remains constant, provided that "producers can adjust their prices, techniques, and employment." Dr. Levinson has not told us—presumably because of lack of data—whether this law follows from the nature of the cosmos, whether it is an economic datum limited to the United States or is of universal significance, or whether it is the degree of organization that accounts for this fact.

If adjustment of prices, techniques, and employment means adjustment independent of the restrictions of unions, then the argument would seem to be both more reasonable and less subject to proof. On the other hand, if adjustment simply means decisions subject to the restraints of private groups but not of government, the conclusions of Dr. Levinson are by no means inevitable. Let us assume a level of unionization of the labor force so that the entrepreneur cannot shift to unorganized industries or even into an unorganized area. Entrepreneurs can still adjust to prices and output, but the ability to raise the first depends upon the elasticities of demand for various products. The price of the product cannot be exclusively determined by the entrepreneur. Therefore, he can only determine unilaterally whether to operate and at what rate. Should the unions, therefore, attempt to cut into profit, they might be able to do so effectively, for there would be no escape hatch and suicide, even of an economic kind, has not yet come to be regarded as an efficient form of survival.

One conclusion that seems to emerge is that the pressure of unions has made for rapid and significant cost-affecting changes, as is shown by the gains of both employers and workers in the unionized industries. One could use this as one of the best pieces of economic evidence for the efficiency-producing effects of unionism. It is true that unions are today largely concentrated in those industries in which technological change is much easier to introduce than in the nonorganized sector which includes considerable segments of distribution and white-collar work. Yet no one will deny that mechanization of the mines and the dieselization of the railroads were influenced by the level of organization of those industries. Dr. Levinson's argument that profits have remained stable does not seem to be as significant as he indicates. It may be that he has placed too much emphasis upon accounting distinctions, and he has confounded economic with business shares. Is a purchaser of a share of A. T. & T. a rentier or an entrepreneur? The rentier may be in a less favorable position than the profit taker, and as all dollars are equal at the same time, there would be no grounds for inquiries by the worker whose cake is being eaten as long as it was larger, although it does have some theoretical significance. The profit taker who is the decision-maker may be able to shift the burden to others. It seems to me that to argue that labor unionism has no effect is to refute the evidence. Profit takers may be in a position to prevent, for a time at least, any erosion in their return, but this is of no consequence as far as labor is concerned as long as there are other sources for increasing their share.

One would also have to reject the assumption of Dr. Levinson of rigid cost-price relationships or markups as the explanation. No proof for this view has

been presented. First of all, changes in terms of sale may be made although nominally prices will remain the same. The higher current trade-ins for some consumer durables are a good illustration of this practice.

To assume that unions have no influence is a bit heroic when one contemplates their pervasiveness and the variety and strength and extent of their activities. Obviously the flexibility and adaptability of the system is far greater than had recently been assumed by many economists, for, irrespective of the pressures, profits still get, according to this paper, its "rightful" share. This is somewhat reminiscent of an analogous argument put forth by the orthodox Marxists, who, in defending their proposition of the increasing misery of labor under capitalism, retorted that although labor's actual position was improving, it was nonetheless not improving nor could it improve as fast as the position of other classes. Consequently, labor was faced with (relative) increasing social misery. If the cost-price relationship postulated by Dr. Levinson existed and was as firm as he indicates, many adjustment problems of the economy would be much simpler than economists generally believe, for aside from the effect upon pensioners and a few dividend-receiving widows and orphans, inflation would be no problem. It is a bit difficult to believe that, like the Northwest Mounted, the entrepreneur always get his share.

Professor Bronfenbrenner's paper presents us with three types of evidence: inconclusive empirical data; an analysis based upon a given model; and the "wisdom of great men."

Unions have only now at their highest membership levels only 17 million members out of a total of 53.1 million workers eligible for membership in trade unions. This is slightly above 33 per cent. In earlier years, the number of workers belonging to unions and the ratio of members to the total eligible was much lower. It is not known how the workers are distributed within an industry as to wages and what share of the total wage bill paid in an industry goes to unionized and nonunionized workers. Contrary to Professor Bronfenbrenner's view, it is not difficult "to make meaningful comparisons between union and nonunion plants in the same industry." They seem to be much easier to make than many other kinds of wage comparisons, including the effect of collective bargaining upon shares. A study of 902 selected occupations in 32 manufacturing industries made by the U. S. Bureau of Labor Statistics in 1946 and 1947 showed that average union rates exceeded those paid in nonunion plants in 87 per cent of those occupations. In only one of the 32 industries did union workers in a majority of selected occupations have lower average rates than nonunion workers (H. M. Douty, "Union and Nonunion Wages," in W. S. Woytinsky, *Employment and Wages in the United States*). Of course, the differences are not uniform in amount or extent, for variation in wages is influenced by factors other than the unionization of employees. The differences were greater on a national basis than when measured regionally—another condition to be expected as variations in wages are strongly influenced by circumstances prevailing in local labor markets. Yet there must be considerable significance in the persistence of differences in such a large number of industries, occupations, and conditions. Moreover, that unions have

an effect upon wages seems to be supported by some of the data of Professor Kuznets. A shift in intratype income could be due to the greater organization of workers, as the shift was in favor of the manual groups.

Professor Bronfenbrenner argues that collective bargaining is likely to lead to disguised unemployment. This had to do with the allocation of labor among firms and industries and to the extent that workers are compelled, either by exclusion from a trade by union control or by the refusal of employers to hire at higher wages, to work at jobs below their maximum skill. The classic work of Professor Sumner Slichter on this subject fails to support the view that the policies of trade-unions lead to a misallocation of labor by reducing the number of skilled artisans. He found that it is not unusual for employers to train fewer apprentices than is permitted by the union agreement and that on occasion "one finds unions going out of their way to encourage employers to hire the full quota of apprentices permitted by union rules" (*Union Policies and Industrial Management,* page 31). Except as far as rates influence demand for labor, it is incorrect to say that unions misallocate labor. In fact, their recruitment for jobs and distribution of job information leads to an opposite conclusion. The effect of wage rates upon allocation is, moreover, unknown.

As only a minority of unions engage in such regulation and the effect of those who resort to such regulation does not appear to be a misallocation of labor, the question seems to me to be completely out of place. Disguised unemployment is largely a depression phenomenon. It is when the incidence of unemployment is high that workers will, in desperation, accept any job after a fairly lengthly period of idleness. In a subsequent period of prosperity, it is the skilled workers who are in shortest supply. This is due to the failure of industry to train workers in times of low activity. Consequently, with a change in business conditions and with expansion in demand for labor, a shortage of skilled workers is likely to appear. Moreover, it is not easy in the short run to change the relation between numbers of skilled and unskilled workers in a plant and the argument of Professor Bronfenbrenner on this point seems to be without merit.

It is sometimes difficult to follow the argument that trade-unions impede innovation. Aside from quoting someone with an opinion on the question, I find nothing in Professor Bronfenbrenner's paper in support of this view. A study by the Department of Commerce shows that in terms of physical volume, purchases of equipment in recent years, when labor was relatively more organized, averaged about twice those made in 1929. The new equipment was used not only to reduce costs but was designed to produce new kinds of products. The meaning of innovation is not always clear in the literature, but this seems to me a fairly good example of the introduction of innovations in the economy. There are, of course, many reasons for differences in the rate of innovations. Yet the ease with which some members of the guild throw off opinions may present a stimulus to thinking, but the view that collective bargaining interferes with innovation must be taken as an unproved hypothesis.

# BIG UNIONS AND INFLATION

## ALTERNATIVE POSSIBILITIES OF INFLATIONARY PRESSURES AND HIGHER COST BOTTLENECKS IN AN ECONOMY OF LARGE BARGAINING UNITS AND OF LESS THAN PURE AND PERFECT COMPETITION IN THE MARKETING OF PRODUCTS

## DO THE WAGE-FIXING ARRANGEMENTS IN THE AMERICAN LABOR MARKET HAVE AN INFLATIONARY BIAS?

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### I

For more than twenty years the annual average of hourly earnings in American industry has risen without a break. This is the longest stretch of unbroken rises on record since the beginning of the Bureau of Labor Statistics' index of the hourly earnings of nonagricultural workers in 1840.[1] There was a twenty-five year period, from 1895 to 1920, when hourly earnings did not fall, but in four years during that time they did not rise.

Money wages in the United States have always had a strong tendency to rise. Today the average nonagricultural worker earns as many dollars in an hour as his predecessor earned in two eleven-hour days back in 1840. As a result of the rise in prices, the hourly earnings of a worker today will buy only about nine times as much as the earnings of a worker in 1840. Were trends of the last 113 years to continue for another 113 years, the hourly earnings of nonagricultural workers in 2066 would average $35 and would have a purchasing power of about $14 in terms of present dollars, or $84 for a six-hour day.

The rise in hourly earnings has not been continuous, but there have been only 17 years in the last 113 when the annual average of nonagricultural hourly earnings was lower than in the preceding year. In 18 years there was no change in average hourly earnings, and in 78 there was an increase.[2] The rise of prices, of course, has been much

[1] In two periods, from 1860 to 1872 and from 1908 to 1920, the annual averages of hourly earnings increased steadily for twelve years. U.S. Bureau of Labor Statistics, "History of Wages in the United States from Colonial Times to 1928," *Bulletin No. 604*, pp. 521 and 574.

[2] The eighteen years in which there was no change reflect the crudity of the early data. Although the data are too crude to provide accurate measurements of the change between any two years, they undoubtedly give an essentially accurate measure of the direction and the magnitude of the trends.

smaller and less continuous than the rise in money wages. The index of the wholesale price level has increased a little more than 130 per cent, while the index of hourly earnings has increased more than sixteen times that amount.

My present examination of some of the influences that have been determining the movement of money wages in the American labor market will be directed in the main to the supply side of the labor market. The shifts in demand curves in the labor market are undoubtedly far greater than the shifts in supply curves. That is probably the reason why there has been a tendency to explain movements in money wages solely by changes in the demand for labor rather than by changes in supply and demand. In particular, the possibility has been neglected that rightward shifts in the demand curve may discourage rightward shifts in the supply curve or may even cause leftward shifts in the supply curve. But if the short-run demand for labor is usually quite inelastic, as it seems to be, influences acting on the supply curve can obviously have considerable influence on the price of labor.

## II

Before we look more closely at what has happened to money wages, let us examine briefly some of the specific influences on the supply side of the labor market. The history of wages makes it plain, I think, that the individual, unorganized worker in the American labor market has long possessed the capacity to drive a favorable bargain for himself. Even before trade-unionism became important, the gains of technological progress went in the main to people in their capacity as wage-earners rather than to people in their capacity as consumers.

The strong bargaining position of unorganized workers is attributable primarily to two conditions: the ability of workers to withhold efficiency when wages or working conditons are unsatisfactory and the unwillingness of employed workers to accept cuts in customary money wages. Workers who feel that their wages are unfair or who fail to receive increases which they regard as fair become less co-operative and more difficult to manage. Employers know that a dissatisfied labor force is inefficient and expensive. That is why there is such a strong tendency for wages in all industries to move up together in spite of differences in conditions.

The unwillingness of employed workers to accept cuts in customary money wages means that as soon as a wage is set, the labor supply curve changes. A gap appears in the curve to the left of the existing wage. Consequently, in the labor market when demand curves shift to the left, the price is set, not by what the nonsellers will accept, but by the unwillingness of the successful sellers to accept less than the

established wage. Hence, there is equilibrium even though the market has not been cleared. The practical result is that only a fairly long and severe depression will make employers willing to risk the strikes that wage cuts might provoke even among unorganized workers. Thus, the mild recessions of 1861, 1867, 1870, 1885, 1888, 1891, 1904, 1908, and 1949 produced no drop in the annual average of hourly earnings, and the mild recessions of 1854, 1900, 1911, 1924, 1927, and 1938 were accompanied by increases in the annual averages of hourly earnings. (An unchanged annual average may conceal a drop and a rise within the year, but the drop would not be a long one and almost certainly not a large one.) Even in the relatively severe depression of the nineties, the drop in average hourly earnings was quite small.

I have referred to the tendency for wages in all industries to move more or less together. Valuable studies have been made by Dunlop, Garbarino, and others of the differences in wage movements in various industries and of the reasons for the differences. These studies should not obscure the fact that even variations in conditions have produced only moderate differences in wage movements. This point is illustrated by comparisons of the movements of hourly earnings and physical output per man-hour. Very wide differences in output per man-hour are accompanied by much smaller differences in hourly earnings, in spite of the fact that some industries can make wage increases while cutting prices and other industries must raise prices in order to cover the cost of the same wage increases. Garbarino, studying a period (1923 to 1940) when productivity in general was outrunning hourly earnings, found a coefficient of rank correlation of 0.6 between changes in output per man-hour and changes in hourly earnings among thirty-four industries. But this coefficient relates to rank only, and there was far more variation in output per man-hour than in earnings. The six industries with the largest increases in output per man-hour (an average of 226 per cent) had an average increase in hourly earnings of 39 per cent, and the six industries with the smallest increases in productivity (an average of 25 per cent) had an average increase in hourly earnings of 11 per cent.[8] Between 1939 and 1950, a period when hourly earnings were outrunning productivity, there was no significant relationship between changes in output per man-hour and changes in hourly earnings among eighteen industries for which the Bureau of Labor Statistics has estimated increases in productivity. The coefficient of rank correlation was only 0.2. The six industries with the highest increase in output per man-hour (an average of 57.4 per cent) had an increase of 116.8 per cent in hourly earnings; the six with the lowest increase in output per man-hour

[8] J. W. Garbarino, "A Theory of Interindustry Wage Structure Variation," *Quarterly Journal of Economics*, May, 1950, pp. 296-297 and 298.

(an average of minus 4.1 per cent) had an increase of 111.8 per cent in hourly earnings.

## III

Let us now look briefly at the broad movements of wages and prices since 1840. The time may be conveniently divided into two principal periods of approximately equal length: the first, 56 years in length, from 1840 to 1896, and the second, 57 years long, from 1896 to 1953. The first period was in the main a time of falling prices. In 33 out of the 56 years, the index of wholesale prices was lower than in the preceding year, and in the year 1896 the wholesale price level reached the lowest point in the last 113 years. In that year, the index of wholesale prices was one-fourth below the level of 1840.

The second period, from 1896 to the present, has been mainly a time of rising prices. In 38 out of the 57 years, the index of wholesale prices averaged higher than in the preceding year, and today the index of wholesale prices is nearly 3.7 times as high as in 1896.

It has been customary to attribute the downward drift of prices during the second half of the nineteenth century and the upward movement in the twentieth century mainly to monetary influences. Such "explanations" do not tell us much. Money is a medium through which other influences affect the price level, but changes in the supply of money do not in themselves explain the movements of the price level. As a matter of fact, during the latter half of the nineteenth century the supply of money increased far faster in relation to the current dollar value of the national income than during the first half of the twentieth century. Between 1850 and 1896, for example, the money supply increased more than 3 per cent for every 1 per cent increase in the current value of the national income.[4] During the second period, largely because of the rise in prices, the money supply increased less than 1.6 per cent for every 1 per cent increase in the national income. It is evident that the increase in the supply of money had far less effect on prices in the period 1850 to 1896 than in the period 1896 to 1953.

[4] In money supply I include the total deposits of all banks (demand and time) and money in circulation. *Historical Statistics of the United States, 1789-1945*, pp. 262, 263, and 274. If figures for demand deposits alone were available for the entire period, it might be preferable to use them rather than total deposits, but the exclusion of time deposits (which include savings deposits) would be debatable. For national income, I have used for 1850 to 1900 Kuznets' estimates of national income as published in "Uses of National Income in Peace and War." *Occasional Paper No. 6* (National Bureau of Economic Research), p. 38; and from 1900 to 1930 Kuznets' estimates published in Dewhurst's *America's Needs and Resources*, Appendix 4, p. 696. An estimate of the national income for the year 1896 was made by assuming that the rate of change in national income between 1890 and 1896 was the same as the rate estimated for the change in the gross national product between those dates in "Basic Facts on Employment and Production." 79th Congress, first session, *Committee Print No. 4*, Table E 1, p. 11. The gross national product figures, which are expressed in 1944 dollars, were converted into current dollars

Why did the enormous increase in the supply of money not prevent a drop in prices in the first period, and why did the increase in the supply of money produce a large rise in prices in the second period? The greatest single influence on the price level has been war or absence of war. The absence of important wars during the last quarter of the nineteenth century made it possible for the money supply to grow far faster than output without prices being bid up. It was the great frequency of wars during the last fifty-odd years (the Spanish-American War, the Boer War, the Russo-Japanese War near the turn of the century, the first World War, the second World War, the Korean war, and the fear of a third world war) which created every now and then strong preferences for goods as compared to money. The strong preference for goods brought about both the creation of money and attempts to shift from holding money to holding goods. I do not assert that there were no other important influences on the demand side of the market. The deliberate use of government fiscal policy after 1933 to create a price rise was a great innovation, but wars have undoubtedly been the strongest influence pushing up prices during the last half-century.[6]

The differences between the two periods, however, are not solely explained by the demand side of the market. Important changes on the supply side of the labor market have been making wages increasingly sensitive to rises in prices, so that they move up more promptly and completely in response to advances in the price level. This is indicated in Table 1 by comparing the movements of prices and hourly earnings in periods of rising prices.

Recent great gains in union membership have made wages more resistant to falling prices, but this cannot be demonstrated statistically. Indeed, a superficial glance at Table 2 showing movements of hourly earnings in periods of falling prices might suggest that wages have become less resistant to a drop in prices.

Such an interpretation of the table would be wrong. The two early periods (1865 to 1871 and 1882 to 1896), when hourly earnings rose most in the face of falling prices, were partly periods of cyclical expan-

by the use of the index of wholesale prices. For the period 1930 to 1950, estimates of the national income by the Department of Commerce were used after adjustment for the difference between these estimates and that of Kuznets for the year 1930. The changes in the money supply and in the national income were as follows:

| | Money Supply (Millions) (June 30) | National Income (Billions) |
|---|---|---|
| 1850 | $ 306 | $ 2.2 |
| 1896 | 6,992 | 12.3 |
| 1950 | 190,926 | 219.8 |

[6] The Civil War created a strong preference for goods relative to money; so that the increase in the money supply for a brief period had a far greater effect on prices than during the rest of the latter half of the nineteenth century.

TABLE 1

| Period | Rise in the Index of Wholesale Prices | Rise in Hourly Earnings of Nonagricultural Employees | Rise in Hourly Earnings as a Per Cent of the Rise in Wholesale Prices |
|---|---|---|---|
| 1843–47 | 5.0% | 3.0% | 60.0% |
| 1849–56 | 14.6 | 8.3 | 56.8 |
| 1860–65 | 116.7 | 48.7 | 41.7 |
| 1879–82 | 12.4 | 6.8 | 54.8 |
| 1896–1907 | 40.2% | 29.0% | 72.1% |
| 1915–20 | 122.2 | 127.2 | 104.1 |
| 1932–37 | 33.3 | 37.8 | 113.5 |
| 1939–48 | 108.4 | 104.1 | 96.0 |
| 1949–51 | 15.7 | 13.2 | 84.1 |

The index of hourly earnings of nonagricultural workers prepared by the Bureau of Labor Statistics terminates in the year 1932. In the above table and the table below, rough estimates of average hourly earnings outside of agriculture have been made as described below. These estimates are crude, but they are undoubtedly sufficiently accurate to show the response of hourly earnings to price changes. For the period 1932–37, nonagricultural hourly earnings were estimated by computing a weighted average of hourly earnings in manufacturing, railroading, and bituminous coal mining. For the period 1937 to 1939, nonagricultural hourly earnings were estimated by computing a weighted average of hourly earnings in manufacturing, bituminous coal mining, building construction, and railroading. For the periods 1939–48, 1948–49, 1949–51, and 1951 to July, 1953, the average hourly earnings outside of agriculture were estimated by computing a weighted average of hourly earnings in manufacturing, bituminous coal mining, building construction, railroading, the telephone industry, wholesale trade, and retail trade. In order to eliminate as much as possible the effect of interindustry shifts, constant weights were used for each period. In all cases the weights were based on employment in the terminal year or on the terminal date of the period.

TABLE 2

| Period | Fall in Wholesale Prices | Change in Hourly Earnings of Nonagricultural Employees | Rise in Index of Hourly Earnings Relative to the Index of Wholesale Prices |
|---|---|---|---|
| | Periods Prior to 1896 | | |
| 1840–43 | 13.1% | 0 % | 15.1% |
| 1847–49 | 7.4 | + 5.9 | 14.4 |
| 1856–60 | 11.6 | 0 | 13.1 |
| 1865–71 | 37.3 | +17.2 | 86.9 |
| 1872–79 | 30.4 | −14.5 | 22.8 |
| 1882–96 | 29.7 | + 9.5 | 55.8 |
| | Periods Subsequent to 1896 | | |
| 1920–22 | 37.4% | −11.1% | 42.0% |
| 1929–32 | 32.0 | −20.2 | 17.4 |
| 1937–39 | 10.7 | + 2.1 | 14.3 |
| 1948–49 | 5.0 | + 4.3 | 9.8 |
| 1951–July 1953 | 3.4 | +11.4 | 15.3 |

sion and partly periods of contraction.[6] Furthermore, in the first of these periods, the rise of wages in the face of falling prices was undoubtedly in part a result of the great lag in wages behind prices during the period of the Civil War. All of the more recent periods of falling prices, except the last, were periods of business contraction and in all of them the rise of wages relative to prices compares favorably with the great period of contraction in the seventies. As a matter of fact, the rise per year of wages relative to prices in the later periods of contraction (even the Great Depression of the thirties) was greater than in the seventies.[7]

## IV

Five principal influences on the supply side of the market have increased the responsiveness of wages to increases in prices and have built up a tendency for wages to increase fast enough to force an increase in prices. They are: (1) the decline in the proportion of adult population in the labor force; (2) the great drop in the ratio of agricultural employment to nonagricultural employment; (3) the drop in immigration; (4) the rise of trade-unionism; and (5) the development of government wage policy. The drop in ratio of agricultural employment to nonagricultural, the drop in immigration, and government wage policy have also been major influences modifying the structure of wages.

1. *The Decline in the Proportion of Adult Population in the Labor Force.* Part of this decline, namely, the withdrawal of many older persons, has been involuntary. Nevertheless, the proportion of population ten years of age or over in the labor force, after climbing considerably from 1870 to 1910, dropped substantially in the next thirty years. Had it not dropped, the labor force in 1940 would have been 5.5 million, or 10 per cent, larger than it actually was. Since 1940, there has been a small rise in the proportion of civilian population of fourteen years of age or over in the civilian labor force. This has been the result of the growing popularity of work among women. Among young men, especially those in the age brackets twenty to thirty-four, the proportion in the labor force has been dropping substantially, at least since 1930. The age group twenty to thirty-four is especially important to industry because its members are at the peak of their strength and vigor. Had the labor force participation among males twenty to thirty-

[6] In the first period there were 34 months of expansion and 50 months of contraction; in the second, 90 months of expansion and 90 of contraction. A. F. Burns and W. C. Mitchell, *Measuring Business Cycles*, p. 78.

[7] It will be observed that neither of the two tables includes the periods 1907 to 1915 or 1922 to 1929. These are best regarded as periods of stability. There was a brief recession in 1908 and a recovery in 1909. Between that year and 1915 the price level moved up and down by small amounts with virtually no net change. The same is true of the period 1922 to 1929.

four years of age been as high in 1950 as in 1930, the labor force in these important age brackets would have been more than a million, or about 7 per cent, greater than it actually was.

2. *The Great Drop in the Ratio of Agricultural Employment to Nonagricultural Employment.* In 1840 there were about 2.2 persons employed in agriculture for every worker in nonagricultural employment. By 1880 the ratio was one to one, and by 1930 the number of workers outside of agriculture for every worker in agriculture had risen to 3.9 and by 1950 to 7.6. The sharp drop in the relative size of the agricultural labor force is of great importance in explaining the behavior of wages because agriculture has provided a large reservoir of cheap labor, much of it possessing more than mere rudimentary skill in the mechanical arts.

3. *The Drop in Immigration.* In the forties and fifties of the last century, net immigration totaled more than 20 per cent of the average size of the labor force during the decade, in the eighties 18 per cent, and in the sixties and seventies about one-seventh. The decade of the nineties was an exception—net immigration was only 9.2 per cent of the average size of the labor force. The first decade of this century, when net immigration was 16.7 per cent of the average labor force, was the last period of large immigration. During the twenties net immigration was only 6.7 per cent of the average labor force, in the thirties there was no net immigration, and in the forties immigration was 1.6 per cent of the average labor force. The reason for this drop in immigration is, of course, mainly our immigration law. It means that the economy in periods of expansion can no longer readily attract large quantities of labor from abroad.

4. *The Rise of Trade-Unions.* Unions seem to have had considerable influence for brief periods in the nineteenth century, but their sustained influence began with the twentieth century. In 1897, union membership was about 3 per cent of nonagricultural employment other than self-employed, managers, professional workers, and unpaid family workers. The spurt in membership at the turn of the century caused this proportion to rise to over 5 per cent by 1900. By 1910, the proportion was nearly 10 per cent and by 1920 more than 19 per cent. By 1933, however, union membership was down to less than 7 per cent of the nonagricultural labor force exclusive of proprietors, managers, professional workers, and unpaid family workers. It was in 1933, of course, that unions began to come into their own with powerful aid from the government. By 1940 union membership was about 25 per cent of the nonagricultural labor force, exclusive of proprietors, managers, professional workers, and unpaid family workers, and by 1950, about 40 per cent. Around two-thirds of the workers in manufacturing, and four-fifths in

construction, transportation, and mining are organized. Only the markets for agricultural products compare with the labor market in the extent of the arrangements for helping sellers gain favorable terms from their point of view.

5. *The Development of the Wage Policy of the Government.* Only within the last thirty years can the government be said to have had a wage policy, but in recent years the government has become an important influence in the labor market. The government exerts its influence through the Fair Labor Standards Act, the Bacon-Davis Act, the Walsh-Healey Act, through the direct purchase of labor, and through large construction projects which the government is financing—some of them in areas where wages have been relatively low. Except for the period of the second World War, the influence of the government has been designed, in the main, to help the sellers of labor get a better price rather than to help the buyers keep the price down.

## V

A number of economists have expressed doubts that trade-unions, despite their rapid growth, have had much influence on money wages. Professor Friedman, in his stimulating discussion on "The Significance of Labor Unions for Economic Policy," has expressed the view that "laymen and economists alike tend . . . to exaggerate greatly the extent to which labor unions affect the structure and level of wage rates" (in *The Impact of the Labor Union,* edited by David McCord Wright, page 204). He goes so far as to assert that the United Automobile Workers and the United Steel Workers "were responsible for preventing the wages of their members from rising as much as they would in the absence of the union." (*Ibid.,* pages 210, 217-228.)

Professor Friedman's views are shared by a number of economists, and I wish to examine the evidence for and against them. It would be surprising, I think, if the views of Professor Friedman were correct. It is the principal purpose of the trade-union movement to influence the level of money wages. Unions have demonstrated many times their ability to force employers to accept unwelcome conditions, such as the closed shop or the union shop. Even the automobile workers' and steel workers' unions, which Mr. Friedman regards as weak, have established the union shop in their industries, formerly citadels of the open shop. It would be strange if the bargaining ability of unions were so specialized that unions were able to force employers to accept the deeply-abominated union or closed shop and yet not force them to pay somewhat higher money wages than they would otherwise pay.

Such a failure of unions to influence money wages would be surprising for another reason—because unions introduce important changes in

the methods of buying and selling labor. In the absence of unions, pricing in the labor market is on a take-it-or-leave-it basis, similar in a way to most retail markets except that in the retail market the seller names the take-it-or-leave-it price and in the labor market the buyer names the take-it-or-leave-it price. It is to be expected that negotiated prices would be more responsive to increases in demand than the take-it-or-leave-it price. The quickness of the response is likely to have important long-run consequences because it may determine whether savings in cost are captured by the workers before they are passed on to consumers.

The view that unions have little influence on money wages is supported by three principal reasons. In the first place, it is said that managers, realizing that unions will strongly oppose wage cuts, are less willing to raise the wages of union workers than the wages of nonunion workers. In the second place, attention is called to the fact that union contracts in the past have usually run for a year or more. Hence, it is said that unions are unable to press promptly for wage increases when business expands. Finally, it is pointed out that union leaders sometimes seek to discourage stiff wage demands because they believe that the boom will be temporary and that large wage increases will price the union members out of the market.

All of these reasons, it will be observed, relate to the influence of unions during periods of expansion rather than during periods of contraction. I do not believe that the first of these three suggested reasons has been important, but the other two have at times had limited influence on union wages. The possibility of cutting the wages of nonunion workers in case business turns bad has little or no influence on the willingness of employers to increase the wages of nonunion workers. The reason is that wage cuts are likely to cause trouble even when the workers are not union. A notable example of a union contract retarding wage increases was the three-year contract made by the United Miners shortly before the United States entered the first World War. Wages soon rose far above the rates specified in the contract and, in spite of the union's heroic efforts to help employers get labor at the rates agreed to, the market soon compelled the negotiation of new rates.[8] Today unions and employers are well aware of the pitfalls in long-term contracts and rarely freeze wages for more than a year. Many recent contracts have provided for reopening of wages on relatively short notice. There have been times, too, when union leaders have sought to limit the wage demands of their members. This happened in some of the building trades unions during the second World War. The leaders remembered the difficult adjustments when

[8] A case where the long-term contract worked in the opposite way was the five-year agreement between the compositors' unions and the commercial printers of New York, effective in January, 1928. It provided for annual wage increases. By the time the depression was well advanced the employers were seeking relief, but they did not obtain it.

prices fell after the first World War and they wished to avoid repetition of that experience. And union leaders often warn their members against the danger of getting union rates too much above the rates in competing nonunion plants. But evidence that union leaders do this hardly supports the view that unions have no tendency to accelerate the rise in money wages.

It is plain that unions have a considerable effect upon the structure of money wages. True, many nonunion employers meet the union scale and, now that the threat of unionization is strong, a few deliberately pay more than the union scale, but the most frequent case is the one of higher wage scales in union plants. Furthermore, the history of unionism is full of instances of unions forcing a large part of their employers out of business through enforcing differentials above the nonunion scale. Examples are the coal miners' union, the hosiery workers, the men's clothing workers (the Chicago market), the potters, the tapestry carpet weavers, the shoe workers, the flint glass workers, the cotton textile workers, the women's garment workers, and others.

But the ability of unions to modify the structure of wages does not indicate that unions affect the movement of wages through time. Their influence on the structure of wages may be a once-for-all effect unaccompanied by any tendency of unions to accelerate the rise in money wages. Several attempts have been made to measure the effects of unions on wages through time. Douglas' pioneer attempt, in his *Real Wages in the United States, 1890-1926,* produced ambiguous results because his union figures were in the main time-rate figures and his so-called "pay roll" figures (which came from industries in which unions were weak) came mainly from industries (textiles, hosiery, men's clothing, boots and shoes, meat packing, iron and steel) in which piece rates or tonnage rates predominate. Hence, the comparison was as much one of relative movements of day-work and piecework earnings through time as it was one of the movement of union and nonunion earnings.[9] The

[9] Douglas found greater cyclical fluctuations in pay roll wages than in union wages, with a tendency for union wages to rise more slowly than pay roll wages in periods of expansion and to fall more slowly in periods of recession—or for union wages not to fall at all in periods of recession. But this is the kind of contrast in movement that one would expect to find between hourly earnings based on day rates and hourly earnings based on piece rates. I suspect that the cyclical differences in the wages of the two groups was a result partly of the fact that one group was organized and the other not and partly of the fact that one group was mainly timeworkers and the other mainly pieceworkers. But the relative influence of these conditions cannot be measured. The fact that in the thirty-six years from 1890 to 1926 the hourly earnings of the union timeworkers rose almost as much as the hourly earnings of the other group attests to the influence of unions. The earnings of pieceworkers tend to rise faster than the earnings of timeworkers because many small changes in materials, equipment, and method do not lead to the rates being reset. Hence, the fact that the hourly earnings of union timeworkers rose over the entire period almost as rapidly as the earnings of nonunion pieceworkers indicates that unions had a strong influence on wages. On the tendency of the earnings of pieceworkers to rise faster than wage rates, see my *Union Policies and Industrial Management,* pp. 255, 256, and 293.

investigations of Ross and Goldner lead them to conclude ("Forces Affecting the Interindustry Wage Structure," *Quarterly Journal of Economics,* May, 1950, pages 254-281) that recently organized unions tend to accelerate the rise in hourly earnings. But Ross and Goldner measure wage changes in absolute rather than relative terms—a procedure which I think is incorrect. Hence, although I believe that this part of their conclusion is correct, their proof is unsatisfactory: they have perhaps demonstrated that unions grew fastest in the industries which happened to have the highest wages in 1933, but they have not shown that unions accelerate the rise in wages.[10]

The most thorough investigation of the movement of union and nonunion wage rates is that of H. M. Levinson (*Unionism, Wage Trends, and Income Distribution, 1914-1947,* Michigan Business Studies, Vol. X). He divides the period he studied into seven principal parts: 1914-20, 1920-23, 1923-29, 1929-33, 1933-38, 1938-41, and 1941-47. Two of these seven periods (1920-23 and 1929-33) were mainly or entirely times of business contraction. In both of these periods the hourly earnings in the more highly organized industries showed much less tendency to drop than hourly earnings in the less organized industries.[11] There will be little dispute, I think, that unions tend to hold up wages in periods of severe contraction: they widen the gap in the labor supply curve immediately to the left of the existing wage. As a matter of fact, unions push wages up during the early parts of business contractions. For example, union rates continued to climb for two years after the stock market crash of 1929. (Bureau of Labor Statistics, "History of Wages in the United States from Colonial Times to 1928," *Bulletin No. 604,* page 574.)

One of the periods covered by Mr. Levinson was the time of the second World War, from 1941 to 1947. Government controls of wages were so complete during this period that it is not surprising to find no relationship between the degree of union organization and the movement of wages. Government policy was devoted in the main to two objectives: (1) to prevent the bargaining power of the strong unions from producing inflationary wage increases and (2) to concentrate wage increases more or less among the lowest paid workers in order to give relief from rising prices where it was presumably most needed. Nearly all of the unions co-operated with the government.

Another period studied by Levinson, 1923-29, was a time of pros-

[10] I agree with Ross and Goldner that "the strongest influences on wages seem to have operated throughout the economy rather than affected individual industries differentially." *Ibid.,* p. 280. I believe, however, that at least since 1933 unions should be regarded primarily as a general market influence.

[11] Levinson, *ibid.,* p. 47. The period 1920-23 contained a year of recovery. In all the union industries, wages were generally higher in 1923 than in 1920; in the nonunion, wages were generally lower in 1923 than in 1920. In 1922, however, union wages were below 1920 but the drop was less than the drop in nonunion wages. *Ibid.,* pp. 34-35.

perity but not of general boom; the speculative buying was limited to the stock market and real estate. It was a time when unions as a whole were not prospering. Total union membership remained unchanged at 3.6 million between 1923 and 1929, making no recovery from the 1.4 million drop from the peak in 1920. In this period of weakness, unions influenced the wages of their own members but had little influence on wages outside their union plants. Hence, a comparison of wages in highly unionized industries and poorly organized industries clearly shows wages in the former definitely outrunning wages in the latter between 1923 and 1929 (Levinson, *ibid.*, page 47).

Of the remaining three periods studied by Levinson, the first, 1914 to 1920, was for the most part a strong sellers' market, and the other two (1933-38 and 1938-41) were times of rapidly rising wages in the face of substantial unemployment. In the first period, 1914 to 1920, nonunion wages rose considerably faster than union wages (Levinson, *ibid.*, page 33). In the other two periods, union and nonunion wages went up at more or less the same rate (Levinson, *ibid.*, pages 60-61 and 65). And yet despite the fact that during the first World War nonunion wages rose faster than union wages and that during the periods 1933 to 1938 and 1938 to 1941 union and nonunion wages rose at about the same rate, I think that union pressure for higher wages substantially accelerated the rise of all wages in these periods. This assertion requires that I explain the limitations of comparisons of the movements of wages in the well-organized and less organized industries over more or less extended periods as a method of deducing the influence of unions on money wages and that I adduce specific evidence for believing that unions accelerated the rise in the general level of money wages between 1914 and 1920 and between 1933 and 1941.

## VI

The attempt to deduce the influence of unions on money wages by comparing the movements of wages in highly organized industries with the movements in less well-organized industries assumes that the influence of unions on wages is greater in the well-organized industries than in the poorly organized industries. This seems like a reasonable assumption, and it is true much of the time—particularly during severe recessions or other periods, such as 1923 to 1929, when unions are having tough going and gaining few members. But this method of testing the effect of unions breaks down in those times when unions exert great influence on the wages of nonunion workers. Furthermore, the greater the influence of unions on the wages of nonunion workers, the more complete is the breakdown of the method. In periods of strong sellers' markets, when unions are gaining members rapidly and winning large

wage increases and thus exerting a powerful influence on wages in nonunion plants, the method of comparing wage changes in union and nonunion plants may show no apparent influence of unions at all. Many unions may be held back a few months in raising the wages of their members by unexpired agreements, and yet the unions which are negotiating may be winning large increases which have immediate repercussions among employers who fear that unionism will spread to their workers. Hence, unions may cause the money wages of nonunion workers to rise faster than the average wages of all union workers. Attempts to detect the influence of unions by comparing the movements of union and nonunion wages through time fail at precisely those periods when the influence of unions is strongest. It is necessary to use methods that enable one to observe more closely the changes in union and nonunion wages and that take account of the circumstances accompanying wage changes.

All three periods, 1914-20, 1933-38, and 1938-41, were times when unions were accentuating the effect of the rightward movements of demand curves by raising the supply price of labor but when the effects of unions on wages were obscured because unions were a general market influence. Let us consider first the period 1914 to 1920 when nonunion wages outran union wages. Unions were not the only important influence on the supply side of the market, because the wage structure was adjusting itself to the sudden stoppage of immigration, but unions were an important influence. Union membership virtually doubled between 1914 and 1920 and labor stoppages increased from 1,204 in 1914 to 4,450 in 1917 and remained well above 3,000 a year for the entire period. During 1919 more than one-fifth of so-called "employed wage-earners" were at some time engaged in a strike—the largest proportion on record. (By "employed wage-earners" the Bureau of Labor Statistics means all wage-earners except those in occupations or professions in which strikes rarely, if ever, occur.) It is significant that the rise in hourly earnings between 1919 and 1920, according to the estimates of Douglas, was the largest (23.3 per cent) for any year in the period.

It would be fantastic to argue that the rapid spread of unionism and the great growth in the number of strikes did not alarm nonunion employers and did not lead them to raise wages in an attempt to keep their people satisfied. The efforts of nonunion employers to keep out unions are revealed in the spread of employee representation plans. Such plans had been quite rare prior to 1914. They were adopted by many companies during the first World War in an effort to keep out unions.[12]

[12] The Standard Oil Company of New Jersey, the Standard Oil Company of Indiana, the International Harvester Company, the Goodyear Tire and Rubber Company, the Westinghouse Electric and Manufacturing Company, the Bethlehem Steel Corporation, Yale and Towne were among the prominent companies adopting employee representation plans

The periods 1933-38 and 1938-41 were also times when the influence of unions on wages was so great that it was a general market influence substantially affecting the wages of nonunion workers. The government, also, through the National Industrial Recovery Act, the Bacon-Davis Act, the Walsh-Healey Act, and the Fair Labor Standards Act, exerted a powerful influence on wages, especially on the wages of the lowest paid employees and on wages in the South—wages which unions were least able to influence. Membership in unions almost quadrupled between 1933 and 1941, and work stoppages increased enormously. In 1933, strikes were more than twice as numerous as in 1932 and they were particularly numerous in 1934 and 1937. Employers attempted to halt the spread of uninonism by organizing employee representation plans as well as by making wage concessions. The employees covered by representation plans increased from about 1.3 million in 1932 to about 2.5 million in 1935.

Many employers who endeavored to halt the spread of unions by granting wage increases found themselves having to give a second increase after the first one failed to halt the growth of the union. The United States Steel Corporation is an example. On November 6, 1936, the Corporation offered the company unions a 10 per cent wage increase. This was done at a time when more than 8 million people (about one-sixth of the labor force) were unemployed, when there had been little movement in the hourly earnings of factory workers for ten months, and when there had been little movement in the consumers' price index for over a year. The increase failed to weaken the interest of the employees in unions. Hence, early in March, 1937, the Corporation and the Steel Workers' Organizing Committee entered into an agreement by which the company recognized the union as the representative of its own members and granted a second wage increase of ten cents an hour.

About the same time that the Steel Workers' Organizing Committee was winning its important victory over U. S. Steel, the automobile workers were winning important victories over General Motors and Chrysler, and in April, 1937, the constitutionality of the Wagner Act was upheld. Under the influence of the Roosevelt victory in November, 1936, the steel settlement, the victories of the automobile workers, and the upholding of the Wagner Act, hourly earnings in manufacturing, which had scarcely changed in the face of rising industrial production between January, 1936, and October, 1936, rose steadily throughout 1937.[13]

during this period. Not to be confused with the plans adopted by companies for the purpose of keeping out unions are the plans forced on companies by government agencies such as the National War Labor Board and bitterly resented by the employers.

[13] Hourly earnings of factory workers were 55.3 cents in January, 1936, and 55.5 cents in October, 1936. In March, 1937, they were 59.5 cents and in December, 1937, 64.3 cents. U.S. Bureau of Labor Statistics, ***Production-Worker Employment, Payrolls, Hours, and Earnings in Manufacturing Industries, 1914-1938,*** LS 55-0902, 9-52, p. 9.

This increase in hourly earnings during 1937 occurred in the face of only a small rise in the adjusted index of industrial production, from 116 in January to 121 in May, followed by a drop to 87 in December—in the face of falling prices after April, and in the face of a monthly average of 7.7 million unemployed, or about one-seventh of the labor force.

What happened to make hourly earnings rise substantially after remaining unchanged for ten months in 1936? Simply the largest gain in union membership in any single year in the history of the United States! The growth in union membership between 1936 and 1937 was in excess of 3 million, or more than the entire trade-union membership of the country at the bottom of the depression in 1933. The spurt in trade-union membership was accompanied by a doubling in the number of strikes, making 1937 the largest year up to then in the number of work stoppages and the next to the largest in number of workers involved. Can anyone contend that the enormous jump in trade-union membership and the doubling of the number of strikes had nothing to do with wages rising in the latter half of 1937 in the face of falling production and rising unemployment?

## VII

Of particular interest is the period from the end of the second World War to the present. It is during this period (or most of it) that Professor Friedman asserts that the United Steel Workers and the United Automobile Workers held down the wages of their members. It has been a time when hourly earnings in poorly organized industries have risen almost as rapidly as in well-organized industries. Retailing and wholesaling, which are poorly organized, have lagged behind the better organized industries, but in the field of manufacturing, hourly earnings in the poorly organized industries increased as rapidly as in the well-organized ones. Among eight manufacturing industries with less than 40 per cent organization in 1946, straight-time hourly earnings increased by 49.4 per cent between January, 1947, and July, 1953, and among eighteen manufacturing industries with 60 per cent or more of the employees organized, hourly earnings increased by 48.8 per cent. I believe, however, that the period 1946 to the present is one in which unions have exerted a powerful influence on the wages of nonunion workers. Hence, efforts to test the effects of unions by comparing the movement of union and nonunion wages over fairly extended periods of time are inconclusive. But careful examination of what was going on in the labor market at the time important union settlements were made shows the influence of these important settlements. Let us seek to appraise the contribution of unions to the postwar wage-price spiral by looking at the record.

For some months prior to V-J Day, factory employment had been dropping. It was 1.4 million less in August, 1945, than in February, 1945. It continued to drop for some months after V-J Day: it was 1.7 million less in December, 1945, than in August, 1945. Indeed, not until October, 1946, did factory employment exceed the level of August, 1945. Hours of work were falling also, and with them weekly take-home pay. Average weekly earnings in manufacturing, which had been $47.12 in April, 1945, decreased to $41.72 in August and $40.97 in October. The consumers' price index had changed little for a considerable period before and after V-J Day. On January 15, 1945, it was 127.1; in August, 129.3; and in February, 1946, 129.6.

The end of the war saw prompt moves by public officials to encourage workers to demand large wage increases. On August 18, 1945, President Truman relaxed wage controls by permitting the War Labor Board and other agencies to allow employers to increase wages without government approval, provided such increases were not used as the basis for raising prices or resisting proper price reductions. In late October, President Truman in a broadcast to the nation urged "substantial" wage increases as "imperative . . . to sustain adequate purchasing power and raise the national income," with the line on prices held to avoid inflation.

Enterprises which were cutting back hours to forty a week (or in some cases to forty-four) saw the necessity of passing on at least part of the saving from the drop in overtime payments. The earliest increases (in Hercules Powder and Du Pont, for example) were 10 per cent, but on September 9, 1945, the Standard Oil Company of New Jersey put into effect a 15 per cent increase in pay together with a forty-hour week. The C.I.O. unions were quite generally demanding a 30 per cent rise in base rates to offset cuts in working hours. The first big test came in the oil industry. By the end of September, oil refineries in six states were closed by strikes, and early in October the President seized the plants of eleven oil companies. The key settlement in the oil industry came on December 16, 1945, when the Sinclair Oil Company settled for an 18 per cent wage increase. This settlement was followed in the next month or so by the other oil companies.

The next great test came in the automobile industry. The General Motors strike began on November 21. It was followed by large strikes in the electrical products industry on January 15, 1946, the meat-packing industry on January 16, the steel industry on January 18, the copper industry, and other industries. The many and large strikes in the latter part of 1945 made the year by far the largest then on record in terms of man-days idle and second only to 1919 in terms of the proportion of employed workers involved. But the year 1946 was destined far to surpass 1945 in time lost. The increase in the number of strikes was small and

so was the rise in the proportion of workers involved (though one out of seven of the so-called "employed workers" participated in stoppages), but the longer duration of strikes caused the time lost nearly to treble. No other year comes close to 1946 in the amount of time lost by strikes or lockouts. In the great majority of strikes in 1945 and 1946 the principal issue was wages.

The big strikes in the industries dominated by large and rich corporations (automobile, electrical products, steel, agricultural implements) were settled for about 18 to 18.5 cents an hour. In the steel dispute, after the United States Steel Corporation had offered 15 cents, President Truman proposed 18.5 cents. Late in January, while the steel strike was still unsettled, Ford and Chrysler, which had not been struck, settled with the automobile workers for 18 cents and 18.5 cents, respectively, and these figures proved to be the approximate points of settlement of nearly all of the negotiations involving large and prominent enterprises.

The settlements were only several cents more than the employers had offered before the strikes. This fact shows that managements did a good job of estimating the willingness of the unions to fight. But the offers of employers to powerful and aggressive unions do not indicate what employers would have done in the absence of such unions. The so-called "pattern" settlements in the oil, automobile, steel, and other industries were well above the settlements that were being made by most concerns and had the effect of accelerating the rise in wages generally. This is shown by comparisons of the pattern settlements with the settlements and by comparisons of the movements of wages before and after the pattern-setting settlements.

A special survey by the Bureau of Labor Statistics of general wage changes in 6,000 plants between V-J Day (August 18, 1945) and May 1, 1946, showed that most wage increases were far less than the pattern. In manufacturing plants, 21.3 per cent of workers covered by the survey received no general wage increase at all between August 18, 1945, and May 1, 1946, 15.2 per cent received general increases of less than 10 cents an hour, 16.6 per cent increases of 10 to 15 cents, 15.4 per cent increases of 15 to 18 cents, and 23.7 per cent increases of 19 cents and over (*Monthly Labor Review,* September, 1946, page 344). In selected nonmanufacturing industries (retailing, wholesaling, finance, services, heat, light and power), where union organization in general was weak, general wage increases were fewer and smaller. Between August 18, 1945, and May 1, 1946, 59.2 per cent of the nonfactory workers received no general wage increase and 25.2 per cent more received increases of less than 10 cents. In other words, among this group of industries only 15.6 per cent of the workers, or less than one-sixth,

received an increase of 10 cents an hour or more. It seems clear that where unions were strong, wages behaved quite differently from the way in which they behaved where unions were weak.

Comparisons of the movement of hourly earnings before and after the pattern-making settlements in late January and February, 1946, show the effects of these settlements in accelerating the upward movement of wages. In the four months, October, 1945, to February, 1946, "urban wage rates" had increased 4.3 per cent, but in the two months following the pattern settlements, from February to April, 1946, they increased more than twice as fast—5.3 per cent.[14]

The above evidence of the lags in wage increases in 1946 in nonmanufacturing industries is of considerable interest. During the entire postwar period, hourly earnings in retailing and wholesaling—two large industries with little union membership—have risen almost as fast as in manufacturing, where two out of three production workers are union members. Between February, 1946, and January, 1953, straight-time hourly earnings increased by 66.5 per cent in manufacturing and hourly earnings increased 55.9 per cent in wholesaling and 60 per cent in retailing. And yet between August 18, 1945, and May 1, 1946, 48.4 per cent of the employees in wholesaling and 63.6 per cent in retailing among the plants covered by the survey of the Bureau of Labor Statistics had received no increases. The union industries were evidently setting the pace and the less well-organized industries were following suit.

I shall not make extended comment on the other years of the period 1945-53. In 1947 the settlements in the industries composed of wealthy and prominent corporations were on the basis of 15 cents an hour. The year saw more people engaged in strikes than usual, but nearly all of these strikes were small ones. After the big strikes of 1946, the large employers and the unions alike were anxious to avoid trouble. A threatened strike of oil workers in seven oil companies in five western states in February was averted by increases equivalent to more than 20 cents an hour (New York *Journal of Commerce,* February 20, 1947). When negotiations in the rubber industry broke down and the union issued a strike call to 100,000 men, a tentative settlement was made by a wage advance of 11.5 cents. This settlement, however, was obviously not regarded as a pattern because reopening of the wage issue was permitted after 120 days. The pattern was set by the settlement between General Motors and the United Electrical Workers in April for 15 cents. This

[14] *Monthly Labor Review,* November, 1946, p. 659. Urban wage rates, it will be recalled, measure changes in basic wage rates resulting from general changes in wage scales and from individual wage-rate adjustments within occupational classifications. They exclude the effects of most changes in the composition of the work force and of shifts in employment between occupations, regions, and industries. They also exclude changes in payments for overtime work, holidays, and vacation.

was quickly followed by the same settlement in the steel, electrical products, and agricultural implement industries and in the automobile industry generally. The agreement in the rubber industry was revised to meet the pattern.

The price which the large employers were willing to pay to keep the peace was definitely above the market. This is shown by 310 settlements made just before and after April and during April. Less than 28 per cent of these (86 out of 310) were for 15 cents or more, 83 were for less than 10 cents, and 61 for 10 to 11 cents. Among 180 settlements made in the first three months of 1947, 45, or one-fourth, were for 15 cents an hour or more. In the three months before the pattern settlements, January to April, 1947, average hourly earnings in manufacturing rose 2.5 cents; in the three months following the settlements, April to July, hourly earnings in manufacturing rose 4.4 cents. Both wholesale prices and the consumers' price index rose more rapidly between January and April, 1947, than between April and July.

The year 1948 is difficult to interpret, but I conclude that the union influence in this year in most industries was less than in previous years. The large enterprises, which in 1947 had been primarily concerned with avoiding a repetition of the big strikes of 1946, were in 1948 primarily concerned with halting the wage-price spiral that had been fostered by the large wage increases of the last two years. Consequently, a determined effort was made to hold the line. At the opening of negotiations between the General Electric Company and the United Electrical Workers, the company announced that it did not care to take the responsibility for the inflationary effects of a wage increase. As a result, negotations were deadlocked for weeks. In April, 1948, the United States Steel Corporation refused the demand of the steel workers for a "substantial" wage increase. The attempt of employers to hold the line led to deadlocks or breaking off of negotations in the agricultural implement industry, the rubber industry, and the aluminum industry.

The union in the steel industry was bound by its contract not to strike. It remained to be seen whether any of the other large industrial unions would strike. They were obviously reluctant to do so, each perhaps hoping that some other union would take the lead. In May, 1948, however, the United Automobile Workers attempted to break the deadlock by pulling a strike of its 75,000 members in the Chrysler Corporation. Somewhat to the surprise of everyone, the union succeeded in breaking the deadlock, but not in the way that had been foreseen. It was not an agreement between the U.A.W. and Chrysler which set the pattern. While the Chrysler strike was still unsettled, General Motors, instead of taking advantage of the union's preoccupation, offered an increase of 11 cents plus future adjustments for changes in the cost of

living and an automatic increase of 3 cents a year for gains in productivity. The offer was accepted and became the basis for settlements in reopened negotiations in the steel, aluminum, rubber, agricultural implements, and electrical products industries. These settlements did not contain the cost-of-living or productivity features of the General Motors settlement but were generally for a straight 13 cents. (In rubber the settlement was for 11 cents, in the electrical products industry for 8 per cent, in aluminum for 10 per cent.)

I do not know the motives of General Motors in making its settlement. Perhaps the management thought that wage increases would be good for the economy as a whole; perhaps General Motors feared that Chrysler would not hold out much longer with its rivals making cars and would set a pattern that would be detrimental to the rest of the industry. That the settlement was generous is indicated by the fact that out of 129 wage settlements in March and April and in May up to the 20th, only 23 were for 13 cents an hour or more and 54 were for less than 10 cents an hour.[15] The effect of the settlement was to quicken the rise in hourly earnings in manufacturing. Between January and May, hourly earnings had increased from $1.302 to $1.324 or 2.2 cents; in the same length of time, May to September, the increase was 6.2 cents.

In 1949, a year of mild contraction, the influence of unions was definite, though limited. In the face of market conditions that would have yielded unorganized workers little or nothing, unions continued to make gains. It took some striking to win these gains, and the proportion of "employed workers" engaged in work stoppages increased from 5.5 per cent in 1948 to 9.0 per cent in 1949. The most notable gain was the successful strike of the steel workers for noncontributory pensions. This victory led in the following months to a rapid spread of noncontributory pension plans.

In both 1950 and 1951 the influence of unions on money wages was limited and was confined to particular industries. But in 1952 the steel workers won a great victory over the steel industry and the government which had far-reaching effects on wages in other industries and virtually destroyed the wage stabilization policy of the government.[16] The victory came after the longest strike in recent years in the industry and was equivalent to more than a 21-cent wage increase. How far the settlement was out of line with the market is indicated by the fact that out of 745 settlements in manufacturing industries in the three months, April,

[15] National Industrial Conference Board, *Management Record,* April, 1948, pp. 254-256; May, 1948, pp. 294-296; June, 1948, pp. 382-384. Even in June and July most settlements were below the pattern. Of 87 compiled by the N.I.C.B. made between June 15 and July 15, 1948, only 19 were for 13 cents or more and 29 were for less than 10 cents.

[16] The real destruction of the wage stabilization policy of the government was accomplished by the United Miners. The miners were intent on getting more than the steel workers had won, and the miners succeeded.

May, and June, only 98 were for 15 cents or over and only 5 were for 20 cents or over. Among 520 settlements in nonmanufacturing industries in the same period, 77 were for 20 cents an hour or more and 281 for 15 cents an hour or more (United States Bureau of Labor Statistics, *Current Wage Developments,* May, 1952, June, 1952, July, 1952). The larger proportion of settlements for 15 cents or better among the nonmanufacturing industries reflects the fact that many nonunion plants outside of manufacturing granted the increases allowed under the government's wage stabilization policy only after considerable delay.

The steel settlement stimulated rises in wages in many industries. The coal industry was the most notable. The union insisted on a large increase in spite of much short-time work and considerable unemployment in the industry. But straight-time hourly earnings in manufacturing, which had been unchanged since April, 1952, began to move up and by November were 5 cents higher than in July.

## VIII

Let me conclude these remarks with a brief summary and a few observations on matters of theory and policy. Changes in money wages must be explained by influences on the supply side of the market as well as by influences on the demand side. It would be a miracle, no doubt, if the wage-fixing arrangements of the economy had no inflationary or deflationary bias—if they kept the general level of labor costs from rising or falling over the period of the business cycle despite changes in technology and changes in the demand for goods. It looks very much as if the wage-fixing arrangements in the American economy have a small inflationary bias—that they tend to put up wages fast enough to require a slow advance in our price level.

Influences on the supply side of the market (particularly the ability of dissatisfied workers to withhold efficiency) have a strong tendency to keep fairly small the differences in the rates at which wages in most industries rise. Hence, there is a rough similarity in wage movements in most industries, in spite of considerable diversity in conditions in different industries. Various changes on the supply side of the market during the last fifty years have had important influences on both the structure of wages and the movement of wages. The drop in immigration and the great drop in the size of the farm labor force relative to the nonfarm have raised the wages of the unskilled relative to the wages of the skilled. These influences and other influences as well have made wages more responsive to increases in the demand for labor and less responsive to decreases in the demand. Trade-unions are among the influences affecting the responsiveness of wages. Within the last twenty years unions have become so pervasive and so powerful that they are a

general market influence affecting, usually after short lags, the wages of nonunion workers almost as much as the wages of union workers.

The influence of unions in periods of expansion may be summarized as follows: Wages in some occupations or industries increase sooner and faster than elsewhere. Aggressive and powerful unions, such as the miners, the steel workers, or the teamsters, may be partly or largely responsible for the larger than average increase, but there are many reasons. The susceptibility of employers to pressure varies with conditions. These conditions I have not explored. Sometimes managements may yield rather readily because they wish to keep the unions weak and divided. The petroleum industry, in which managements are striving to avert company-wide agreements, is an example.

The pattern-making settlements, though substantially out of line with most settlements at the time, influence the course of wages in industry generally. Hence, over a period of time there is not a great difference in the increase in average hourly earnings in the pattern-setting industries and in industry as a whole. For example, between the years 1947 and the middle of 1953, there was not a great difference in the increase in average hourly earnings in the pattern-setting industries, in manufacturing as a whole, and in retailing and wholesaling, as the following table shows:

| | Increase in Average Straight-Time Hourly Earnings January 1947 to August 1953 |
|---|---|
| Blast furnaces and rolling mills | 61.2 |
| Petroleum | 58.9 |
| Automobiles | 52.3 |
| Coal | 59.5 |
| Electrical machinery | 48.8 |
| Tires | 49.0 |
| All manufacturing | 51.0 |
| Retailing | 45.7 |
| Wholesaling | 46.9 |

An examination of local labor markets will show a similar influence of settlements by powerful unions, such as the teamsters, building trades, and printers, upon the wages of other unions and upon nonunion wages. Settlements, which are out of line with the market accelerate the rise in the market so that over a period of a few years there are not great differences in wage movements between the pattern-setting industries and other industries.

In periods of contraction the influence of unions is much less than in periods of expansion—though more easily detected. In mild recessions many unions are able to negotiate improvements in wages and fringe benefits in spite of leftward shifts in the demand curve for labor.

The years 1933, 1934, 1937, 1938, 1940, 1941, 1946, 1947, 1948, 1949, and 1952 are recent years in which trade-unions seem definitely

to have accelerated the rise in money wages. I have made no effort to measure precisely the increase in money wages attributable to trade-unions. Since the year 1933, however, the increase attributable to unions is undoubtedly at least 25 cents an hour and probably more.

The largest wage increases considerably exceed the average growth of output per man-hour throughout industry as a whole. Hence, when unions tend to spread these increases, they tend to raise wages faster than the average gain in productivity, thus bringing about a rise in labor costs. The advance in labor costs undoubtedly stimulates technological progress, but it is bound also to produce either unemployment or a higher price level.

If our wage-fixing arrangements have an inflationary bias, what should be done about them? From the standpoint of the rest of the world, a slowly rising price level in the United States is greatly to be desired. Certainly it would promote the success of our foreign policy. Furthermore, from the domestic point of view, the inflationary bias in our wage-setting arrangements has advantages as well as disadvantages. But let us assume that for domestic reasons we prefer a stable price level. Some people say we should correct the inflationary bias in wage-fixing arrangements by tight credit policy. The economists of the Swedish trade-unions say we should make the employer do a better job of resisting labor's demands by imposing taxes which prevent his passing on higher wages in the form of higher prices. Some distinguished economists, such as Sir William Beveridge and J. M. Clark, say we should build up a sense of responsibility among employers and trade-unionists—that an economy such as ours, which does not automatically keep itself in balance, can be satisfactorily operated only when groups are led by public-spirited and responsible persons.

Neither of the first two proposals is satisfactory, and the third is, I fear, too utopian to be promptly achieved. The problem of correct credit policy in an economy with powerful trade-unions is extremely difficult. One cannot argue that the monetary authorities should create whatever flow of money is required to keep full employment and also to meet whatever wage demands unions may see fit to press. That would confer intolerable freedom on trade-unions. At the same time, correcting an inflationary bias in wage-fixing arrangements by deliberately creating unemployment is wasteful. There must be a better answer.

I do not think that the Swedes have found the answer. It must be possible to stiffen the resistance of employers to excessive wage demands without imposing taxes which are bound to prevent the best use of resources. Clark's analysis of the problem of operating an economy which does not automatically keep itself in balance is admirable. (See his *Alternative to Serfdom,* especially the last chapter.) He is surely

correct that such an economy requires that individuals go far in identifying collective interests with their individual interests, so that each individual gets real satisfaction from observing that the community is prospering. The civilized man is one who feels a deep and broad concern for the welfare of large groups, and the struggle to achieve civilization is essentially an effort to make each individual feel an interest in the well-being of an ever growing number of his fellows. But we cannot wait for the slow progress of the civilization to get better results from the economy. Something quicker is needed.

My belief is that the community must look to employers for help. Certainly, if rising labor costs force a rise in the price level, the community may properly insist that employers do a better job of bargaining. And the community has the means to interest employers in doing a better job of bargaining. The large employers desire and, indeed, need public approval for their principal policies. They have yielded too readily to the claims of labor partly because they did not wish to be shut down while their rivals did business, but partly also because they have felt that a fight on behalf of the consumer would win them less public approval than would the granting of liberal wage concessions. But if the public decides that it must have stable labor costs because it desires a stable price level, it will reserve its approval for the employers who valiantly oppose excessive wage claims and will withhold its approval from the employer who readily accepts higher labor costs rather than risk the costs of a possible shutdown.

Hence, in the last analysis, the answer to the question, "Do the wage-fixing arrangements in the American labor market have an inflationary bias?" will be supplied by the public itself. If the public strongly insists that employers hold labor costs stable, employers will attempt to do so. But if the public is indifferent and if the government attempts to maintain full employment, employers will find it easier to accept small increases in labor costs than to risk shutdowns, and the community will have a slowly rising price level.

# VARIATIONS IN THE INFLATIONARY FORCE OF BARGAINING

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## I. *Product Market and Collective Bargaining Variations*

The central theme of this meeting recognizes that we live in a mixed economy with its respective segments exhibiting varying degrees of competition. I am particularly pleased to share in a program that emphasizes this point, for I think that in the passionate enthusiasm of national income analysis of recent years our concern over the matter of individual variations has been sadly neglected. In considering the inflationary force of the bargaining process I propose to begin with the question: Just how strong is the bargaining process and is it uniform wherever it appears?

Whether or not it can be said that macro- and microeconomics have at last been recognized as twin brothers and are now given the right to stand together, this paper will have to be concerned with both, for I find it impossible to speak about variations without examining individual industries, and I think it equally impossible to speak about inflation without looking at the aggregates. If the aluminum and cement cases have done nothing more for us, they have made us realize once again that even though the whole may be something different from the sum of its parts, to neglect the microscopic study of individual differences of the components is to foster ignorance.

In the studies of the labor market in recent years, economists seem to have become so engrossed in the mere review of the collective bargaining process that they have left little time to observe that there still is an unorganized labor market. We need to remember that even the very rapid and substantial expansion in union membership since 1935 still leaves more than two-thirds of those who work for wages outside the orbit of collective bargaining. The specific terms of the countless thousands of individual employment agreements are very difficult to get and certainly much harder to classify than the contents of the several hundreds of union agreements. But the extent to which we have concentrated on the easier job, in my estimation, has become almost a professional disgrace, and we ought at least to show some chagrin at having so largely neglected the more difficult and perhaps more important task.

Of course, the neglect has not been complete, and some writers have tried to study the collective bargaining process as a small portion of the total labor market. But the excess concentration on the collective bargaining process has led to disregard of other aspects of labor market analysis, and also it has nourished the assumption that collective bargaining on wages has a substantial uniformity. In spite of the common elements of group action, this assumption in my view is subject to very important qualifications.

It probably is no more completely wrong than is the claim of universal competition, but just as we have learned through Chamberlin and others that there are great variations in the character of competition in product markets, so, too, it is time for us to recognize that the collective bargaining process is also subject to wide variations. Moreover, I think that the Chamberlin analysis of degrees of product market competition can help in classification of variations in bargaining activity.

In 1933, when my *Collective Bargaining in Chicago* was published, I began to lay the groundwork for such a classification based on the character of costs and product markets in the industries where collective bargaining was then to be found. Omitting bargaining in railroads and mining, which were outside my scope, I suggested that the unionism of that day could be classified into three different industrial groups. One of these included industries with relatively high direct unit labor costs and having narrowly limited local markets. Then as now, this was the industrial setting where substantial portions of the older A.F. of L. membership in building construction and urban services was employed. These industries were on the whole naturally competitive, and the trade-union bargain served to establish and maintain the base on which competition might function. The second group—certainly less significant from the standpoint of union membership in 1930—was found to be quasi-monopolistic and the element of direct labor cost represented a considerably smaller proportion of the employer's total expenditure. This group was then best represented by daily newspaper plants and urban theaters. Here the trade-union bargain furnished no framework to support and protect industrial operation; collective bargaining was accepted only because the producing area—as distinguished from the selling area or market—was a local one and employers were willing to pay a premium (I think probably a very slight one) for uninterrupted operation.

The third group found—exemplified in the Chicago study only by the clothing industries—consisted of manufacturing establishments with high proportionate direct unit labor costs compared, for example, with larger heavy mass production industries. This group resembled the first in that these establishments were essentially competitive on the cost

side but their produce market was a nationally open one. In an industry such as men's clothing as it existed before the first World War with high unit labor cost and no striking advantage for large-scale production units, the collective wage bargain has, I think, acted as an element of shelter to the larger manufacturing units against the onslaught of unrestricted wage-price competition from smaller firms.[1] G. P. Shultz's and C. E. Meyer's study of the shoe industry indicates that my threefold classification was probably too simple even for the unionism existing before 1935, although the shoe industry does have some of the economic characteristics of the clothing industry. Their article ("Union Wage Decisions and Employment," *American Economic Review*, June, 1950, pages 362-380), which suggests that collective bargaining represents "the adjustment of wages to the realities of business and employment conditions," parallels my own thinking.

Since 1935, although collective wage bargaining remains and has indeed grown in all three of these groups, also something new has been added. In an article published in the Winter, 1938, issue of the *University Review* (University of Kansas City), I made the following remarks, which I now ask your permission to repeat:

> The really significant feature of the recent growth of labor organization . . . is not that it is industrial in form, but rather that it represents an invasion into the industries where hitherto it has been possible to achieve and to maintain quasi-monopolistic conditions without the aid of the stabilization of labor standards through trade union action. In these sections of economic activity unionism can contribute little to industrial control. (Page 113.)

Without retreating from that statement I am now ready to suggest that the growth of unionism in these new areas since 1935 was largely due to the following factors:

1. The concentration of a relatively large proportion of the prolonged (and I emphasize the word "prolonged") unemployment of the thirties in these heavy durable goods industries.

2. The closing of the retreat to the farm as an escape from unemployment.

3. The conjunction of events which combined a temporary release

[1] This amounts to saying that the collective wage bargain has made at least a small contribution toward the elimination of the sweatshop in the clothing industry and may thereby have somewhat reduced the employment volume. In saying this, I also feel impelled to go on and recognize the comment of Professor Chamberlin when he says: "The time is past when the economist who wishes to be friendly to organized labor and critical of monopoly at the same time does not, at least, have something to explain." See Edward H. Chamberlin in David M. Wright *et al.*, *The Impact of the Union* (Harcourt, Brace, 1951), p. 173. I agree fully with the statement and would submit as my "explanation" that I regard the question of degree of monopoly to be permitted in a mixed economy as crucial; moreover, I do not think that we yet have a formula to decide the question without voting. When a critical person says that, he means he considers the question indeterminate and a matter for democratic decision. I find it much easier to say I am willing to vote for unionism in the clothing industry than to accept the judicial decision of the Columbia-Steel case or even that of the Allen Bradley case.

from antitrust restrictions for these industries with legal encouragement to collective bargaining.

4. Finally—and I think most important of all—the fact that the new unionism in these industries could capture the credit for the delayed effect of changes in population growth and migration. On this point may I restate two more sentences from my article of 1938. They are:

> The current movement toward more extensive organization may prove upon analysis to be one aspect of the narrowing of the differentials between wage rates that have prevailed in the sheltered corners (of highly localized labor markets) and those observed in other sections of industry. If such a narrowing of the differentials is actually taking place due to the stoppage of immigration and the slowing down of the natural rate of population growth—not to mention the spreading of educational and training opportunities and other contributing causes—it may be a factor in promoting labor organization in the so-called mass production industries.

Sixteen years after that was written we now have the monumental volume, *Employment and Wages in the U. S.,* by Woytinsky and his associates, recently published by the Twentieth Century Fund. I do not pretend that I have thoroughly digested the full contents of this extended study but I have gone over much of it carefully and have found that although I do not agree with all its contents, I must report it as a veritable gold mine for the labor economist.

May I read a rather long paragraph which summarizes the findings on the changes in occupational differentials:

> In all industrial groups for which data are available, occupational wage differentials show the same general trend. Changes in the spread of wage rates appear particularly sharp when skilled occupations are compared with semi-skilled and unskilled, and the trends become less clear when the last two groups are compared with each other. In the machinery industry, for example, wages in unskilled occupations have increased about 400 per cent since 1907, while machinists rates have increased only 300 per cent. In foundries, paper and pulp manufacturing, and iron and steel, the percentage increases for laborers have been substantially greater than those for skilled workers.[2]

For me, at least, that passage suggests that the collective bargaining process has tended to ride the crest in these mass producing industries where the new unionism is to be found. Relative to the older unionized industries, they have comparatively low per-unit labor cost. Labor costs are real costs and they certainly enter into the calculation of product prices. But the shelter against wage competition among firms in such industries is already embedded in the industrial structure by virtue of administered pricing. Even quasi-monoply is likely to be profitable; and if it is, there are, I think, compelling reasons why unilaterally determined wage rates are going to include some element of those profits even in the absence of collective bargaining.

It is hard for me to find real showing to support the view that collective bargaining by itself can drive wages in these newly unionized

[2] W. S. Woytinsky and Associates, *Employment and Wages in the United States* (Twentieth Century Fund, 1953), p. 472.

industries significantly above levels that would be established by external market forces. It is true that operating under collective bargaining since 1937, wage rates in the heavy industries rose sharply following the close of 1940, but so, too, did employment, business volume, and dollar profits. The evidence is far from conclusive, and there are those who support the claim that collective action produces a positive upward thrust in wage rates.

Perhaps the most clear-cut expression of this claim is that of Professor Arthur M. Ross in his widely known book on *Trade Union Wage Policy*. In an early review of this volume I suggested that the claim was "prematurely made." I now want to recognize that in an article entitled, "Forces Affecting the Interindustry Wage Structure," jointly written with William Goldner, published in the May, 1950, issue of the *Quarterly Journal of Economics*, Professor Ross has demonstrated the type of critical scholarship that deserves our utmost admiration. Taking into account suggestions made by Dunlop and Lester as well as my own, he re-examined the ground covered by Chapter VI in his book with much greater care and reviewed the movement of hourly earnings for over fifty different industrial groups during the period 1933 to 1947. The conclusions reached are substantially different from his earlier ones.

I still doubt that the re-examination supports the belief that unionization is as great a source of wage advantage as the authors seem to think, but their cautious conclusions deserve serious consideration. The following ones have the most direct bearing on my problem:

> In general, earnings have increased most rapidly in those activities showing the larger gains in employment. . . . Increases have been larger (i.e., absolute hourly earnings growth) in heavy industries with an oligopolistic market structure than in the more competitive consumer goods industries, or in transportation industries facing competition from other forms of transport. . . . From an analytical standpoint, the difficulty is that these three influences (unionization, employment change, and oligopolistic market structure), have been operating in substantially the same group of industries. Statistical means are not at hand to disentangle their separate effects or to establish which, if any, is the primary cause. (*Loc. cit.*, page 280.)

I cannot here do full justice to the article but commend it to you for further reference. I do want to suggest, however, that even without further statistical refinement it is possible to say something more about the relative importance of the three influences mentioned, for it can be known in advance that they are not of equal weight. Oligopolistic market structures are known to yield higher profit margins than prevail in competitive industries. Such potential profit margins, however, become most effectively realized under expanding capacity operations when fixed unit charges can be pushed toward the minimum. When it is remembered that approach to full capacity operations will be taking place as employment is expanding in such industries, the primary source of rising wages becomes clear without reference to the influence of

unionism. It may be said that this reasoning overlooks the fact that even with rising employment such industries might retain a larger proportion of their gross sales income were it not for the fact of collective bargaining on wage rates. This is indeed possible, but the determination as to whether this is a sound claim cannot be made by comparing such industries after the introduction of collective bargaining with other different industries which do not follow the collective bargaining practice. The inquiry must then be made within the same type of industry, preferably, if we had a laboratory, with and without the collective bargaining, but in practice it will have to take the form of the before and after experiment. I have made such a preliminary experiment by a very simple comparison of the proportion which the salary and wage bill of the United States Steel Corporation represented of gross corporate income less taxes. This was done for the first sixteen years following the introduction of collective bargaining in 1937 (1937-52) and for the sixteen years immediately preceding (1921-36) when there was no union recognition. We may eliminate six years in each of these periods either because of being special depression or war years. The comparison then reveals the important fact that wages and salaries were actually never a larger proportion, and indeed in some years they were a slightly smaller proportion, of the adjusted gross sales income after collective bargaining than in the ten best business years of the pre-collective bargaining period. These rough calculations, based on the accounting record of a single company, do little more than whet the intellectual appetite. They suggest that the oligopolistic industries share no larger proportion of total income with employees because of the collective bargaining procedure than they would otherwise. Perhaps because the profit position is stronger than under a purely competitive structure, wage rates are likely to be generous with or without the collective bargaining procedure. This is a suggestion made in the spirit of inquiry and my answer to those who are not satisfied with my little experiment is to say that I am not satisfied either and to suggest that they go do it themselves—do it better and do it for still more cases. I intend to myself.

The work of a former student of mine, Marjorie Stanley, now of the University of Arkansas, enables me to expand immediately on this experiment a little more. She has recently completed an extended review of the economic factors supporting collective bargaining in the automobile industry. I quote from her Ph.D. thesis ("The Interrelationships of Economic Forces and Labor Relations in the Automoblie Industry") concerning the relation of wages in the booming automobile industry compared with other industries during the pre-unionized decade of the fabulous twenties. She writes:

In view of the increasing proportion of unskilled and semi-skilled workers in the industry's labor force, it is apparent that the increase in average earnings for automobile workers as a whole was greater than that revealed by data referring to the average earnings of all employees, for a higher proportion of lesser skilled workers would tend to reduce the average earnings figures of the labor force as a whole. Despite the operation of these factors, however, the earnings data which are examined . . . indicate that hourly and weekly earnings in the automobile industry increased substantially during the decade of the 1920's and exceeded those of workers in most other important manufacturing industries. (Pages 108-109.)

You all know the story of the Great Depression, but let me remind you that this was the end of an epoch for the workers in the automobile industry. For two full years after the 1929 crash, there was no significant fall in the hourly earnings of automoblie workers in spite of the absence of collective bargaining agreements that are sometimes supposed to be the source of inflexibility of wage rates. There was, however, a continuing fall in the volume of employment with hardly any abatement from month to month. Even at the end of 1929, unemployment was already severe in Detroit, and by 1932 the number of full-time employees in the automobile industry had declined by 44 per cent while the equivalent figure for U. S. industry as a whole was 24 per cent. (*Ibid.*, pages 152-155.)

It was long after revival had set in that unionism really gained a foothold, and when it did, I ask you to notice that it appeared more spontaneously in the automobile industry than elsewhere and that the initial issues were security and speed-up rather than wage rates. Mark, also, that current emphasis in 1953 is on consideration of the guaranteed annual wage—an employment security issue if you please rather than wage rates. Add to that the observation that it is in this administered price industry that the question of management prerogatives and merit-rating has overshadowed the matter of wage rates, except perhaps for the postwar reconversion years.

There may be elements of monopoly in the administered price industries but these have not been introduced by the late acceptance of collective bargaining. It simply is not true that the new largest membership unions are necessarily the strongest in the bargaining process. Whether they are, depends on the market structure within which they operate, the permanence of membership status, and, most important of all, the economic atmosphere prevailing at the time the negotiations are taking place. In this connection, I resort to another quotation from Woytinsky (*op. cit.*, page 90) which expresses my own views especially well:

In practice, particular wage rates will be fixed and revised by particular contracts. Each case is negotiated separately and settled as the parties to the negotiation decide. Economic realities, however, are stronger than the president of the strongest union or the directors of the richest corporation. The ability of even very powerful personalities to influence the trend in wages is indeed slight.

## II. *Collective Bargaining Not a Generative Inflationary Force*

Since the act of bargaining, even in its collective form, still remains initially restricted within the confines of production and market operations of the negotiating parties, the question of inflationary power becomes this: How much can parties by their negotiation modify the external forces that impinge upon them and how much do they have to adjust their own behavior to these forces? My own view is that in the nature of the case bargaining has to be much more of an adjustment to rather than a modification of these external forces. Even in the case of the famous so-called "pattern setting" wage settlements, I think Professor Albert Rees is correct in saying, in his article, "Postwar Wage Determination in the Basic Steel Industry," *American Economic Review,* June, 1951), that "the observed similarities are to some extent the result of the operation in different industries of similar causal factors such as labor shortages and rising living costs, rather than the result of pattern following" (pages 396-397).

Let me be a little more concrete and assume that bargaining negotiations are in process to determine wage rates for the 300,000 employees of the United States Steel Corporation. In order to generate inflation through the bargaining process, it is necessary that the wage negotiations result in an increase in the aggregate pay roll without any imposed shrinkage in other expenditure and profit items. An increase in wage rates at the expense of profits which is unaccompanied by any change in employment will not generate inflation even though it might shift some of the aggregate income from one group of recipients to another. Similarly, no other internal shift in the distribution of the total income can generate inflationary pressure. We must, of course, recognize that I gloss over the question of variations in the consumption and investment patterns that may be associated with differences in the distribution of the gross corporation income between wage-earners and other participants in the business. I also neglect discussion of the multiplier effect of a wage increase upon future demand for steel because I doubt that it can be of any immediate importance in the contract negotiations. Apart from these factors, collective bargaining that is to be inflationary must bring about an increase in the aggregate wage bill, and if this is not to come from other corporate income recipients, it must come from prices charged to purchasers of steel. Unfortunately, steel workers, even with increased wages, cannot themselves create a demand for steel. But the demand for steel must be effectively increased so that at least the same amount, preferably perhaps still more, can be sold at the new higher prices needed to support the expanded wage rate if employment is not to fall. It is sometimes said that the wage increase can take place because it will increase consumer purchasing power and so expand

production. This argument is fallacious, however, in that each collective bargain must first break through the price structure of the industry in which the increase in wages is to be made. If the wage bargain in our case is to be inflationary, the steel corporation must be able to increase steel prices without impairing production; it cannot do so simply because steel workers with a wage increase might be able to buy more pork chops than if they continued to be paid at the old rates. It will be able to sell the same or larger amounts of steel than it was able to sell on the old price scales, only provided demand for steel has been underwritten by hitherto unused external purchasing power or by the creation of fresh purchasing power from outside the industry. Since the bargaining process cannot create the external demand for the products of the industry in which it is taking place, neither can it create employment.

Now, although there are real doubts as to accuracy of statistical measurements, it is fairly clear that in the years since 1940 we have had inflation and that we have also had an increase in the number of wage-earners working under collective bargaining agreements. This is not a new phenomenon; indeed it is a rather old one. It is, I think, easily explained, but not by the suggestion that collective bargaining is a generating cause of inflation. The first item in the explanation is that if expanding employment takes place in industries where union recognition was already achieved before the expansion occurred, trade-union membership is bound to grow. Closed shop agreements will represent the most positive assurance of such growth in union membership, but these will only modify the pattern slightly for individual industries and emphasize special circumstances in which employers have in the pre-expansion period found the collective bargaining practice congenial or at least acceptable—loosely the old pre-1930 locations. Other industrial settings (again speaking freely)—the new post-1935 areas of administered pricing—where the union was less welcome will, however, also feel the force of the hypodermic of increased job opportunities.

We now know that labor disputes are directly associated with business cycle movements and that they tend to increase both in number and in volume with the upward movement of business activity. The correlation is only rough, and I am aware of the fact that not all important work stoppages occur when business volume is expanding; but the recent studies by Professor Rees in this country and Knowles in England[3] certainly demonstrate that prolonged and widespread unemployment will reduce the volume of labor disputes perhaps more

[3] See K. G. J. C. Knowles, *Strikes: A Study in Industrial Conflict* (Philosophical Library, 1952), especially Chap. IV, and Albert Rees, "Industrial Conflict and Business Fluctuations," *Journal of Political Economy*, October, 1952, pp. 371-382.

effectively than any other phenomenon. Thus we see that there are good reasons to believe that collective bargaining will grow under rising prices and employment. This does not mean, however, that unions through the collective bargaining process can create employment or generate an upward movement in prices. It means rather that they respond to its creation from other sources.

Against such reasoning, there is the experience of the period of the twenties, which has always seemed to be a disturbing element. While the relative quiescence in union growth during the twenties does call for some special attention, it is not an insurmountable problem. The facts were something like this. After the postwar depression of 1921 there was the rather rapid revival, which, except for the slump of 1924, continued on its general course until 1929. But within this general pattern there were some very important special factors. For one thing, the bellwether industry of the so-called "boom" did not expand smoothly and continuously throughout the period. It is true that automobile production quadrupled from 1921 to 1929, but progressive improvements in productivity per worker meant that employment did not expand correspondingly. Moreover, there were clear interruptions in the upward movement both in 1924 and again in 1927, and the pronounced seasonal character of employment operations was evident throughout the period. Add, if you will, the factor of the "American plan" and the industrial detective mechanism designed to support management control in an industry that was being converted from custom to mass production operations.

Remembering this about that manufacturing industry which was leading the expansion of the twenties, then observe the movement of output in one of the other sectors of the economy that had been in the center of the collective bargaining process even before the founding of the A.F. of L.—that of building construction. The building index which moved upward sharply and rapidly to satisfy the demands of a war-starved population reached a peak at the close of 1925 (see Norman Silberling, *Dynamics of Business*, page 569) and, although there was a brief recoil in 1928, so far as the construction industry was concerned the Great Depression of the thirties had already started four years early. When I was examining collective bargaining in Chicago, the record then showed that premium scales far above the approved union rates were being paid to almost half the union members in 1923. Little remained of such premium scales in 1926, and by 1929 union members were known to be taking work at less than the officially specific scales.

Now, consider manufacturing industry generally during the twenties and note that although manufacturing employment rose somewhat, productivity per worker rose still more (Woytinsky, *op. cit.*, pages

30-31) so that although hourly earnings were rising, per-unit labor cost showed a downward trend (Woytinsky, *op. cit.*, page 68). The end result of this decade of high-level activity was to show in the census figures as a reduction in the percentage of the total labor force engaged in manufacturing, a still larger shrinkage in the proportion attached to agriculture, and very great increases in the relative numbers associated with domestic service, trade, and clerical occupations. Speaking broadly, what had happened was that the rapid technological transformation of the period substituted semiskilled operation for much of custom craftsmanship, greatly increased the absolute number of mechanical jobs, made them easy to master, provided high hourly pay relatively more attractive than that for agricultural activity—at least during portions of the year—raised the productivity of agricultural labor, and at the same time necessitated great augmentation in a clerical and accounting force to provide the controls and direct the performance of the growing semiautomatic economic machine. Moreover, broader participation in high-speed jobs and urban living, which were themselves elements of the new technology, introduced the necessity for increased reliance upon numerous types of personal services.

So much for the technological transformation that was the twenties. Now let us look at the price level movements. To say that the decade of the twenties was a noninflationary period with a relatively constant wholesale price index, as a general statement is true (Silberling, *op. cit.*, page 51) but extremely inadequate. From the standpoint of the relation between collective bargaining and inflation, it obscures the most important element of the case. This is the fact that through most of the period there was a declining food price index. One way of expressing this is to say that the twenties represented a period not simply devoid of inflation but rather a period of deflation which was concentrated on agriculture, so that the real wages of urbanized workers even without extensive organization rose still more than the dollar rates indicated. Put all of these components of the twenties together and you have the elements of the explanation for the relative quiescence in the phenomenon of collective bargaining during the period. Take a quick flashback in your record of economic history and recall that the industrialists of Great Britain had learned the significance of a falling food price index, even before the formal statistical calculation of this phenomenon, when they carried on the successful campaign for the repeal of the corn laws in 1848.

### III. *The Inflationary Prospect and Collective Bargaining*

I hope I am now able to bring you to a better understanding of my position when I say that although collective bargaining cannot create

employment nor generate an upsurge in the general level of prices, it may be nourished by both. Moreover, I should probably add that I do not mean to imply by this remark that collective bargaining can have no inflationary force whatsoever; for I think that is not true. Once inflationary movements have been generated from other sources, collective bargaining may indeed help to keep the process in motion. However, we are in serious danger of error if we conclude that the cause of this inflation is the fiend incarnate of the collective wage bargain. I would agree with Professor Walter A. Morton that the original source must come from expanding governmental or private demand, supported either by increases in credit currency or a speeding up of the rate of flow of large accumulated reserve balances. (See his article, "Trade Unionism and Inflation," *American Economic Review,* March, 1950, page 29.) There is indeed a wage-price spiral if prices and employment are moving upward. But the inflationary force of collective bargaining, I think, is drastically limited to the possibility of facilitating the forward motion of an inflationary movement once it has been started by the action of other forces. Just so in the winter time there may be snowball fights and the building of forts, but as a school boy from Wisconsin I can tell you the snow must first fall from the heavens in substantial quantities and the sun must melt it a little before it is good enough for packing!

We are also in danger of still another error if, after recognizing the fact that collective bargaining cannot generate inflation, we go on to assume that nevertheless, through the participation in the wage-price spiral, unionism will significantly influence the rate at which inflation takes place. I would like to suggest that during long periods of important changes in employment and prices our statistical measurements tend to become extremely misleading. Actually, I suspect that the inflation of the war and postwar periods may have been considerably more than the published figures can show. We are badly in need of another Veblen who could see with his sharp eyes and emphasize with his bitter tongue the cultural transformations which our reliance upon time-series numerals causes us to neglect.

Let me see if I can delineate the problem by reference to the use of a cost-of-living index during a period of generally upward moving prices and one that involves increasing industrial production. Such a situation starts with a condition of considerable unemployment, and fortunately for us we do not need to go back far for illustrative material. Take as a beginning 1940, when the second World War was considered a phony and when unemployment in the U.S. was about 8 million, or 15 per cent of the labor force. As the reality of the conflict developed, a cost-of-living index which had been relatively constant for about three years started upward sharply in 1941 and continued its movement until

the first quarter of 1943, while unemployment simultaneously fell until it represented less than 2 per cent of the working force. The leadership in the upward movement of the cost of living was clearly the food price index. Remember that as employment spreads there will be an increase in the wage bill even without any changes in wage rates. Since the augmentation in industrial employment is likely to take effect more rapidly than any increase in total food supplies, a kind of Malthusian law operates on the food price index at once. The sophisticated inquiry as to the level of liquidity preference of workers who have formerly been living on unemployment compensation, relief, or perhaps even personal savings, appears to me to be a game for depressed dilettantes.

But, of course, rising employment beginning in 1940 was supported by growing military demand from government funds, and it did bring increases in dollar wage rates with the consequence of further augmentation in demand for food and also increases on the cost side. The officially calculated food price index showed an increase of a little over 40 per cent for the period from January, 1941, to December, 1943. The bitter controversy between union, management, and government officials over the reliability of the official cost-of-living index does not need to concern us here. However, I do want to remind you that after examining reports giving different points of view, a committee under the chairmanship of the late Wesley C. Mitchell estimated that the increase in the food index might well have been from 3 to 6 percentage points above the government index, although the committee did not accept the claim made by some union officials that the increase was as large as 71.9 per cent instead of the 40.2 per cent which the index showed.[4]

But it is not the statistical errors that must creep into constant time-series, important as they may be, that I wish to emphasize so much as the fact that changes in the volume and character of employment impose changes in consumption patterns which cannot be allowed for in any series. If as expansion continues, unemployment practically disappears —as was the case in 1943—the next step toward increasing total output is the extension of working time. Such extension with or without the payment of overtime rates swells the total pay rolls still further, and with a working population competing for a food supply that grows less rapidly than pay rolls, the resulting rising prices encourage still further reliance upon substitution. An interesting coincidence of the war years will illustrate the point better than fiction. In February, 1943, the War Manpower Commission issued an order raising the standard week in industry to forty-eight hours. Now, even though there may not be complete enforcement of the antitrust laws for business, it seems to

[4] An account of the controversy will be found in Romana Kuntz, Louise Wilde, and Erwin Gaumnitz, "The B.L.S. Consumers Price Index and Its Application to Wage Problems," Serial 3016, *Bulletin* (University of Wisconsin), 2790, July, 1948.

be an inviolable policy of government administration in a democracy that no agency shall ever have complete information on the work of any other. Thus I am sure that it was without consultation that the Office of Price Administration in the same month of the manpower order, for the first time during the war, placed live rabbits and rabbit meat under price control.

Household consumption will change very drastically under inflation, not simply by substitution through a wide range of items, but it will change also in its relative importance and quality. One aspect of the expansion of industrial activity is increasing urbanization, which in turn means increased reliance upon public restaurants rather than the household kitchen; it also means more commuting time, greater difficulty in getting household deliveries of foods, increasing reliance on chain stores for parking space, and longer waiting at the counter for less service. This is what I mean when I say that the war years, and for that matter their aftermath, have contained much more inflation than the statistical measures—even when corrected for technical errors if there are any—can possibly reveal.

Even without allowance for the elements of concealed inflation and taking the various statistical measures at their face value, there is room for doubt as to whether collective bargaining has actually kept pace with the inflationary process, to say nothing of having contributed toward its creation. Probably a sports writer with a journalistic flair started the story of the postwar reconversion wage increases in the heavy industries with reference to the first, second, and third rounds. If I may continue the boxing bout metaphor, with the food price index as the opponent, I would point out that while there was certainly no knockout blow, nevertheless when the gong rang at the end of the third round there was no doubt that the average hourly earnings of the organized workers had been challenged by a superior rival. After reconversion was really under way, increases in the food price index were clearly greater than changes in the hourly earnings in both the steel and automobile industries, and this superiority of the punch of the food price index continued for all three rounds until the referee of rising unemployment and falling demand associated with the post-reconstruction slump in 1949 called a halt to the contest.

But though it may be shown that collective bargaining of the past has grown with rising price levels and was not a generating force, that the wage-price spiral though real is a secondary influence coming after inflation has been originated by other causes, and that there are real doubts as to whether collective bargaining can keep pace with inflation, still there may be those who will say that the entire argument overlooks the fact of full employment and the necessity for its continued maintenance. My answer to this is: First, I personally doubt either the ne-

cessity for, or the continuous possibility of, full employment. I do not thereby claim, however, that large-scale continued unemployment can long be endured. I do think that something short of that is possible and that it will be more than enough to prevent the collective bargaining process from becoming a generative inflationary force. Second, since collective bargaining cannot generate employment, then if there is full employment which does lead to inflation, that should be properly charged to those sources that can really guarantee full employment and not to the collective bargaining process.

On the first point, I would direct attention to what I have called the postreconversion slump of 1949, when the upward movement in the cost-of-living index was clearly arrested and when, in spite of much bombast, industrial workers' earnings both on an hourly and a weekly basis were maintained about comparable with those of the preceding year. During 1949, labor turnover was significantly reduced and there was a reduction in weekly working time as well as some unemployment which, however, never, except for one month, exceeded a total of four million workers. To make my own position clear, I think I should say explicitly that an unemployment volume of something larger than that—perhaps even six or seven million—is not only tolerable, provided it is not long continued, but should be expected. It seems to me that much of the discussion of full employment has now been carried so far that we are in danger of forgetting that the economy, if it is to remain even partially free, is one of risk, uncertainty, profit and loss. While I do not want to advocate the sadistic torture of an economy such as England engaged in with the restoration of the British pound to its old parity levels in 1925, neither do I see virtue in misrepresentation of the economic world as one of perpetual sweetness and light with jobs and profits for everyone all the time. To do so is not only to demonstrate our economic ignorance but, still worse, to perpetrate an intellectual fraud. At long last in 1935 we did institute unemployment insurance. The general pattern of the system is known to you, and I do not undertake to discuss its details, which contain many items that are still subject to improvement. I simply want to say that I think we should not become so engrossed with the fantasy of full employment that we forget that we have already set up a system that contemplates the irregularity of employment. To continue to collect pay roll taxes designed to cushion against the shock of unemployment and then go on to say that there must be no unemployment, seems to me financial trickery in which economists should refuse to participate. Such legerdemain may have some popular appeal, but in moments of temptation I would urge reliance upon Marshall's words: "Students of social science must fear popular approval; evil is with them when all men speak well of them."

Now to my second point that if full employment does lead to con-

tinued inflation, then we should charge it against the point of origin, not to the collective bargaining process. What is the point of origin? You all know the answer: it is in the source which generates the full employment. This is the expansion of credit and currency associated with either new private investment opportunities or, more importantly in our day, with governmental expenditures that are not compensated for by government receipts.

Now it is not my intention to overlook the fact that trade-unionism is not only an institution which does engage in collective wage bargaining but it is also a political force. In its capacity as a political force, through pressure for a government expenditure pattern to promote and maintain full employment, it may contribute its small bit to the promotion of inflation. I think this influence will be rather small, chiefly because trade-unionism, even of the enlarged scale that we have had since 1935, certainly has no monopoly on political power. In the exercise of such political power, it must be supported, not by just a few, but by a large number of voters from the unorganized citizenry. Such a possibility is not so remote that it should be disregarded, but neither should it lead us to emphasize unionism as a generative force of inflation when in fact the responsibility must be shared by all of us who support the inflationary program.

The real source of further inflation, however, in the days ahead, I suspect, will not be from the political forces directed at the creation and maintenance of full employment. Rather it may come from the forced acceptance of the new position of the United States in world affairs without a willingness to assume the cost of that position. With much talk of balancing budgets, there may be no way of making significant reductions in government expenditures nor of increasing revenues to meet them. Hesitation to make small temporary commitments may precede realization of the fact that it is the assumption of large and long-range responsibilities that is really at issue. The voting public while endorsing the common cause may still continue to seek ways of avoiding the cost by protesting against necessary tax burdens. If inflation does continue, it will be principally for these reasons. I suspect that unionism will continue to grow and the collective bargaining process will be forced to protect the enlarged membership against pressure on real earnings. Under such circumstances it is also probable that collective bargaining may be further charged with larger responsibility for a condition which it cannot create. We should be able to hope, however, that the economists, schooled in the long endurance of political unpopularity, will not continue to discuss problems against the mirage of a closed economy but will boldly emphasize the bitter truth that our position as the secluded oasis of the nineteenth century is forever gone.

## DISCUSSION

Albert Rees: The two papers that have just been presented reach opposite conclusions. My own views are in general agreement with those of Professor Christenson, although I should prefer to rest them for the most part on evidence rather different from his. Since I disagree with several of Professor Slichter's conclusions, I shall confine my comments to his paper.

Professor Slichter criticizes those who believe, as Professor Friedman does, that the influence of unions on earnings has been slight. Friedman's argument falls into two parts: first, that unions have relatively little effect in the long run and, second, that during rapid inflations unions do not accelerate the rise in wages and may even retard it. Many of Professor Slichter's comments concerning the long run are well taken. It seems clear to me that unions delay the fall of wages in cyclical contractions and that they raised manufacturing wages in 1937. Considering the extent of unemployment in the late thirties, it is hard to defend Milton Friedman's opinion expressed in "The Significance of Labor Unions for Economic Policy" (*The Impact of the Union,* edited by David McCord Wright, page 211), that unions in the automobile and steel industries had little effect prior to 1945. With respect to rapid inflations, however, Friedman's position is much stronger.

Professor Slichter argues, first, that raising wages is a major purpose of unions. Since unions have the power to achieve their other major purposes, it is only reasonable to conclude that they have the power to achieve this one. But even if unions are as powerful as Professor Slichter believes them to be, during inflations they may fail to exercise their full power over wages. Union leaders and union members know when they have won a grievance or a union shop. They cannot know how much wages would rise in the absence of a union. Thus they tend to take credit for the whole rise in money wages. They may feel that they are achieving their purpose when in fact they are having no effect. However, the growth and survival of the union are not threatened by the hollowness of these wage victories.

In general, Professor Slichter has doubts about the value of comparisons between union and nonunion wages. Nevertheless, he uses them to show the effectiveness of unions in 1946. His choice of urban wage rates as his measure of wages and his choice of industries are both appropriate. His choice of time period, however, seems open to question. Wage averages for most unionized industries rise in steps or jumps at the time of new wage settlements; those of nonunion industries rise more gradually. In these settlements the union seeks to recover past lags and to anticipate future lags. Hence comparisons over short periods including a new wage settlement will almost always be favorable to the union. If contracts are typically for a year, a year should be the minimum period of comparison. Professor Slichter has selected as his time period the eight and one-half months from August 18, 1945, to May 1, 1946. In this period he shows that the proportion of workers receiving wage-rate increases was much larger in manufacturing than in wholesale or retail trade.

However, if we increase the time span only slightly, we find from the same source that the results are altered. In the year from April, 1945, to April, 1946, urban wage rates in retail trade rose 12.7 per cent, in manufacturing 12.4 per cent, and in wholesale trade 8.6 per cent. In the eighteen months from April, 1945, to October, 1946, the rise was 20.4 per cent in retail trade, 18.8 per cent in manufacturing, and 16.6 per cent in wholesale trade (computed from data given in *Monthly Labor Review,* Volume 63, November, 1946, pages 663-666, and U.S. Bureau of Labor Statistics, *Bulletin No. 916,* page 94). I do not want to attribute much importance to these figures. They should serve, however, to introduce a further note of caution into the discussion.

Professor Slichter's general distrust of comparisons between union and nonunion wages is based on the view that unions raise the level of wages in nonunion plants; indeed, he argues that unions can at times raise other wages faster than their own. Thus he attaches little weight to statistics that show substantially equal wage increases in union and nonunion industries during periods of inflation. The argument that unions raise nonunion wages is clearly valid in some instances; for example, where a few employers remain nonunion in a unionized industry or where a nonunion manufacturer is located in a community in which most manufacturers are unionized. At the other extreme, Professor Slichter might want to concede that some very large wage increases have taken place in sectors of the economy where even the fear of unionization is negligible; for example, in agricultural labor and in domestic service. Large sectors of nonunion employment lie between these extremes, including trade, finance, and many kinds of services. In assessing the extent of union influence in such areas, it is helpful to recall that union members are still a minority. Unpublished data kindly made available to me by Professor Leo Wolman show that in 1952 only 31 per cent of nonagricultural wage and salary workers in the United States were union members. This represents no increase over 1947. Professor Wolman's data show somewhat fewer union members than those of the Bureau of Labor Statistics, since they are corrected both for overstatements of membership and for Canadian membership in international unions with headquarters in the United States.

In fact, Professor Slichter seems to put the level of union organization needed to govern the general movement of wages much lower than 31 per cent. He argues that strikes and gains in union membership between 1914 and 1920 were responsible for increases in nonunion wages exceeding the increase in union wages. According to Wolman's data, union membership at its 1920 peak was only 18 per cent of nonagricultural wage and salary workers. I cannot see any way in which Professor Slichter's interpretation of this period could be subjected to empirical test. He has minimized the usefulness of the kinds of tests that have been used by others, without really suggesting any alternative. Thus he moves the discussion into the realm of opinion and judgment. However, statistical comparisons between industries and between time periods still seem to me to have some value.

A demonstration that unions are able to raise wages is necessary but not sufficient to show that unions can cause inflation. In the absence of adequate

total demand for products and labor, higher wages will usually produce unemployment, and this will tend to check the rise in wages. Professor Slichter has not attempted to show any mechanism by which unions can create the required demand. Such mechanisms have been suggested by others, notably by Professor M. W. Reder (in "The Theoretical Problems of a National Wage-Price Policy," *Canadian Journal of Economics and Political Science,* February, 1948, pages 46-61), but they do not seem applicable either to recent experience in this country or to probable experience in the near future.

Between 1939 and 1952, the money supply as measured by total deposits adjusted plus currency more than tripled. This is adequate reason for expecting an inflation with or without trade-unions. Nor does there seem to be any reason to suspect that without unions the growth of the money supply would have been less.

The discussion of the relation between collective bargaining and inflation has been much enriched by Professor Slichter's paper, which brings to bear on the problem a wealth of detail drawn from his vast experience in industrial relations. Yet this detailed knowledge, so valuable in most of Professor Slichter's work, is seen here in an unfortunate setting. Inflation is too pervasive a phenomenon to be explained by reference to particular strikes and wage settlements. Monetary theories of inflation may have shortcomings, but they do have the virtue of suggesting a cause as pervasive as the effect.

Guy E. Noyes: It seems to me that it is a mistake to exaggerate the differences between these thoughtful and scholarly papers. Economists have suffered enough from bad jokes about their inability to agree on anything.

Going over the two papers, I was impressed by the fact that a rather wide difference in assessing the historical impact of collective bargaining on money wage rates comes to a fairly small difference in the final evaluation of the possible inflationary bias attributable to collective bargaining, per se.

The lengthy examinations of the historical record which are contained in the full texts of both papers deserve much more deliberate and painstaking comparison and analysis than is possible here. I am certain they will be read and commented upon for some years by scholars more familiar with this part of our recent economic history than I am.

Searching for what may be an area of agreement, it seems clear to me—I am sure Professor Christenson would agree and I believe Professor Slichter would—that wage agreements have played a small part in the inflationary experience of the United States in the recent period—say from the beginning of World War II. The kind of galloping inflation that is conceived in huge federal deficits and feeds on a practically unlimited availability of reserves to the banking system is not much concerned with whether its riders are auto workers or farm hands, steel companies or small shopkeepers. Certainly the correction of such a situation, if indeed it can be corrected, must come from the adoption of proper monetary and fiscal policies. Clearly, it is not a situation which we can expect employers to correct by a better job of bargaining.

Turning more specifically to Professor Slichter's remarks, he finds his hope

for the future in the possible improvement of the collective bargaining process and in the development of a greater sense of public responsibility on the part of employers. I am sure that better and more responsible bargaining would be desirable, but I believe that this can only come as a by-product of general stability. It cannot be expected to provide the initiating force. If unions and employers can conduct their negotiations in an atmosphere in which stability of prices and stability of employment are reasonable expectations, then, and only then, it seems to me, may we hope for wage bargains which will themselves contribute to stability.

Personally, I am enough of an optimist to believe that we may achieve a reasonable degree of stability—a much greater degree than we have enjoyed in the past—and that if we pursue monetary and fiscal policies which are directed to that end with some visible success, the wage-fixing arrangements are likely to fall into the general pattern. Since Professor Christenson has permitted himself the analogical pleasure of a snowball fight in Wisconsin, perhaps you will permit me to suggest that we cannot blame the tail if we allow it to wag the dog.

What I am saying does not ignore, or deny the importance of, what Professor Slichter refers to as "the supply side of the market." My suggestion is rather that the forces which shape the supply curve may be much more sensitive and responsive to external economic conditions than he estimates and that many of the phenomena he observes are accounted for by prevailing conditions rather than by some intrinsic bias in the institutional framework.

Professor Slichter knows much more about labor leaders than I do and about how they are likely to react to various external conditions. He is also better informed, I am sure, about the even more elusive collective mind of the employer and how it may be expected to respond as we move from a period in which inflationary forces were clearly predominant to one in which price stability is a reasonable business expectation. However, I can see no reason why unions, no matter how pervasive, should not moderate their wage demands in the light of a reasonable prospect of price stability and I can see many reasons—beyond the call of public responsibility—why management might resist, in such circumstances, demands to which it would otherwise have acceded. Conversely, it is difficult for me to see employers standing like Horatio at the bridge if public authorities, advised by professional economists, relapse into the more or less comfortable position that long-run inflation is inevitable—and that there is nothing they should or can do to prevent it.

We cannot reasonably ask those gathered around the bargaining table to provide us with a stable economy; we must make it a reasonable first assumption which both parties can accept as a basis for their negotiations.

# REGIONAL WAGE DIFFERENTIALS IN AN ECONOMY OF LARGE BARGAINING UNITS AND LESS THAN PURE AND PERFECT COMPETITION IN THE MARKETING OF PRODUCTS

## INTERREGIONAL COMPETITION: WITH PARTICULAR REFERENCE TO NORTH-SOUTH COMPETITION

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### I

In classical economics, it is assumed that a country (or region) that suffers a competitive deterioration adjusts to the situation as its balance of payments becomes adverse. In this paper, I contend that the expected adjustments do not take place or only after costly delays. Rigidities and imperfections in the market interfere with the adjustment process. Trade-unions often prevent necessary wage adjustments; government policies put too great a burden on the adjustment process; and movements of labor and to some extent capital are too sluggish to effect the required redeployment of employment. In writing this paper, I am especially aware of the competition between developed and underdeveloped regions, and notably between North and South or, to a lesser extent, East and West.

The classical theory assumes that a loss of competitive position evident in higher relative prices and loss of markets is accompanied by a rise of imports, a decline of exports, a loss of gold, and then reduced monetary supplies and hence lower prices. In response to growth elsewhere and losses in old industries, the older regions presumably will experience a change in their industrial or employment structure, with employment rising in the more advanced employments and declining in the older, less advanced industries. Thus, for example, textiles lose; machinery and metal fabrication industries gain.

One reason for failure to obtain the required adjustment is that trade-unions prevent a reduction of wage rates or a rise in work-loads for the older region (and hence increased man-hour output). These policies are likely to prevent adjustments notably when a trade-union imposes on the weakened region the higher wage rates of higher income areas (e.g., U.A.W., C.I.O.), or when the trade-union is stronger in

the "declining" region than in the new competitive region (e.g., Textile Workers Union, C.I.O.).[1] If the required adjustments are not made, the region will suffer large and long spells of unemployment. Any inflexibility or lack of venturesomeness or unwise investment policies of management contribute further to the delay in adjustments.

A second factor that tends to aggravate the problem of adjustment is public policy. Insofar as the government favors the newer industrial regions through tax and spending policies or favors these regions through pricing policies (farm support programs) and increases the competition for the older regions (e.g., through reduction of tariffs), to this extent the government adds to the burden on the older region. The required adjustment in prices, given all the rigidities, puts an excessive burden on price adjustments. In various publications, I have discussed in some detail the contributions of the government in aggravating the adjustment problems for New England.[2]

Still another factor that interferes with the adaptation to a new industrial structure is the failure of labor and capital to move into the new industries or thriving localities in the region. Capital moves easily from region to region—much more easily than from country to country; and the fact that obstacles to international capital movements are much greater than they used to be, tends to increase interregional movements. With capital and management easily moved and labor rather immobile (as has been noted in numerous studies of the New England economy), the tendency is for large surplus labor supplies to be concentrated in the older regions and particularly in the towns harboring the declining industries.[3] That capital and management move easily and labor does not, aggravate the distortions.

Again, wage rigidities interfere with wage adjustments that might attract new employments. Ultimately, unemployment may bring about lower wages and attract new industries. But the tendency for the new industries is to avoid the depressed areas. The genuine situation in

[1] Professor De Vyver has estimated that in seven important industries in eleven southern states, the percentage of union members relative to the percentage of employment in the nation for these industries varied from 24 per cent in lumber and lumber basic products, 25 per cent in apparels (43 per cent in textiles) to 53 per cent in construction and 62 per cent in coal, and 117 per cent in tobacco manufactures. F. T. De Vyver, "Labor Factors in the Industrial Development of the South," *Southern Economic Journal*, October, 1951, p. 194.

[2] *The New England Economy: A Report to the President by the Committee on the New England Economy*, 1951, Chap. XIII; S. E. Harris, *The Economics of New England*, 1952, Parts II and V; *Report on the New England Textile Industry by Committee Appointed by the Conference of New England Governors* (S. E. Harris, Chairman), 1952, *Report*, pp. 65-69; *Research Report*, pp. 273-284.

[3] *The New England Textile Report*, pp. 145-146; The Commonwealth of Massachusetts, *A Report on Unemployment Compensation Benefit Costs in Massachusetts*, 1950, p. 29; and "Reconversion in New England," *Monthly Labor Review*, July, 1946, pp. 12-13.

the older regions has been concealed to some extent in the last ten to fifteen years by the unusual prosperity engendered in part by large public outlays.

It is also assumed that prices and wages would ultimately rise in the newer industrial regions, thus contributing towards a solution of the imbalance in the older regions. Indeed, there is evidence of a narrowing of the difference in wage rates; for example, from 56 per cent to about 10 per cent in cotton textiles from 1890-99 to 1950 and close to 20 per cent early in 1952. But we should not leave out of account the growth of the fringe differential (in textiles, accounting for a differential equal to one-third of the total eighteen cents differential in late 1952), the gains in relative power costs for the South, the artificial advantages given via social security to newer and growing regions, with much less unemployment and lower benefiits, the use of tax systems that discriminate in favor of industry, the constant flow of labor from the farms. These are gains for the South.

When classical economics assumes that costs and prices would rise in the regions exporting much, it fails to allow sufficiently for the vast untapped resources of farm labor fed by the high fertility in the farms. (The South has twenty times as much farm labor as New England.) This constant movement from the farms tends to depress the wage rates and prices in the South and delays adjustments. These problems are discussed at length in the *Report on the New England Textile Committee* (see especially Chapters 3-6, 15-17).

That artificial restrictions on trade are not available to the extent that they are in international trade further strains the adjustment process. A region nurturing new industries can capture a larger part of the market and with much greater speed than a foreign competitor can capture the market of an American industry, and, as we note later, it is interregional trade that really counts. In interregional trade, no exchange problems arise; no possibility of tariff revisions; and hence large investments in selling may be made with less risk than in international trade; and free movement of capital, management, and ideas, often stimulated by the firms in the older regions, contribute to the rapid diversions. The magnitude and speed of the changed direction of regional trade puts an especially large burden on the region threatened by the new competition. Yet this region does not have the way out, open to a nation; namely, restrictions on trade which might slow up the adjustment process. It is significant that no government will tolerate large losses to foreign competitors over a short period; and yet in national economies, the government not only may allow much larger losses to regional rivals but through its policies will even accelerate the movement.

## II

The major competition faced by American industry is interregional, not international. For example, exports out of the country are but 4-5 per cent of the gross national product. Obviously, most sales are at home. In fact, a large part of all sales are within the region or even city of production. This is perhaps even more true of services than of movable goods. A large part of our services are almost exclusively free of interregional competition—medical, local, and state government, public utilities, domestic service, local transport, public education, etc. Here competition outside the city or region is distinctly limited. This point is of importance because it underlines the limited area within which adjustments in response to losses in interregional competitive position must be made.

It is well to remember that manufacturing income in 1952 accounted for but 31 per cent of all income. The major adjustments in the competitive position of a region have to be concentrated to a considerable extent on this part of the economy. Hence, large losses in interregional competition, say in textiles and shoes, if they are to be made good in substitute exports, must largely be made good in improvements in manufacturing "export" industries. Agriculture, forestry, fisheries, and mining account for but 9 per cent of the national income. Here competition is relevant but the limits of adaptability are determined largely by the resources available.

An estimate of approximately forty items included in service employments and accounting for 60 per cent of all income suggests that only about 10 per cent of all income and corresponding employments included here are largely subject to interregional competition. Thus for retail trade, public utilities, transportation, telephone services, most services (education, religion, cinema, private households), local and state government, and a large part of federal government, the location of activities for the most part is determined by the present distribution of population and income. Only as population and income are redistributed will the services be redistributed. They are determinates, not determinants. Substantial parts of wholesale trade and of insurance are examples of services subject to interregional competition. (See *Survey of Current Business,* July, 1953, page 16.)

Here is a listing of various employments on the basis of variations for seven regions in the percentage of income for each employment in 1949 as a percentage of the region's income (wages and farm) accruing to each employment. The employment listed first is the one with the greatest range; e.g., the total of the percentages below 100 and above 100 for the regions are a maximum (based on materials in *Regional Trends in the United States Economy,* page 71). The presumption is

that where variations are small (e.g., bottom three employments and even possibly the fourth and fifth from the bottom), all regions divide the employments roughly in accordance with income and there is little play for interregional competition.

| | Total Deviation | Total Maximum Range, Lowest to Highest Region |
|---|---|---|
| 1. Agriculture and mining | 495 | 227 |
| 2. Construction and manufacturing | 200 | 82 |
| 3. Services: finance, insurance, real estate | 137 | 49 |
| 4. Government | 128 | 61 |
| 5. Transportation | 56 | 20 |
| 6. Trade | 44 | 25 |
| All noncommodity (inclusive of 3–6 above) | 44 | 30 |

Source: Calculated from materials in *Regional Trends in the United States Economy*, 1953, page 71.

An indication of the areas of competition is given by the distribution of various types of incomes by regions. The above study is based on income accruing to each employment as a percentage of the region's share of the nation's wage and farm income for 1949. Then we compare for each region the percentage of incomes earned by different employments relative to the region's share of the nation's income. Thus in the seven regions of the country, for 1952, the average percentage of trade and service income to the region's total income payments varied only from 24.1 to 28.0 per cent (the U. S. average was 25.6). In construction, the range was from 3.4 per cent (New England) to 5.0 per cent (Southeast). Here the differences are explained largely by the slow advance of New England and the rapid industrial growth of the South—not by the South selling construction services to other regions. Where the percentage of income accruing to particular employments does not vary much from region to region, it may be assumed that competition is distinctly limited. In some instances, where percentage of employment varies generally, e.g., transportation, the explanation may well be that differences reflect geography rather than interregional competition. Heavy concentration of population explains a low proportion of employment in transportation in New England and Central States, and large distances explain high relative employment in transportation in the South, Northwest, and Far West. Differences in the proportion of service income may also reflect variations in spending patterns in part: the rich Northeast spends more on services than the poor South.

For agriculture, government, and manufacturing, the minimum and maximum figures (taken from the *Survey of Current Business,* August, 1953, page 9) were as shown in the following table.

| | National Average | Minimum | | Maximum | |
|---|---|---|---|---|---|
| Agriculture (income) | 6.7 | Middle East | 1.5 | Northeast | 20.3 |
| Government (income payments) | 15.9 | Central | 12.5 | Southeast | 20.3 |
| Manufacturing (pay rolls) | 24.5 | Northwest | 10.6 | New England | 32.9 |

If a manufacturing region loses heavily in exports, its losses must be recouped largely in manufactures, with some help from services. Yet even in manufactures there are segments where adjustments are not easily made. For example, in 1951 the distribution of manufacturing employment was as follows:

1. Seven industries with location predominantly determined by access to raw materials (and to some extent to proximity to markets) accounted for 35 per cent of the value added in 1951.

2. The location of seven industries accounting for 46 per cent of the value added was determined to a substantial degree by the need of being near the raw materials.

3. The other five industries (textiles, apparel and related, printing and publishing, leather and leather products, instruments and related products) accounting for 19 per cent of value added were industries which might be located largely independently of the proximity to the sources of the raw materials.

The last group would especially be subject to pressures for any adjustments that have to be made.

## III

Despite the obstacles, there is evidence that slowly adjustments are made. Thus though New England was at one time a high-wage area, this is no longer true. The effect of the continued pressure on her balance of payments has been a tendency for New England to become a low-wage area. In manufacturing, her wages are lower than in any other region in the country but the South; and in white-collar work, her pay is often lower than the South. For example, in 1950, average hourly earnings in manufacturing were $1.46 as compared with $1.38 in New England. Of the eighteen industries for which figures were available, New England wages were higher than the national average in textiles (9 per cent), chemicals and allied products (5 per cent), stone, clay, and glass products (2- per cent). These figures might also suggest why New England has been experiencing difficulties in textiles and

shoes, and also not gaining as much as might be expected in chemicals.[4]

On the basis of Census figures, I have calculated for 1950 a weighted average of wages in the three weak, soft industries—textiles, apparel, and leather and leather products—and in the eight strong, growing industries as follows: for New England, hourly wages for the three weak industries averaged $1.29, or 106 per cent relative to U. S. wages; for the eight strong industries, $1.49, or 94 per cent *(ibid.)*.

But, as has been said earlier, adjustments are made more difficult by various governmental policies. For example, as the older region is confronted with these problems of finding substitute employment for the declining, older industries, they face price policies which tend to raise the prices of food and raw materials imported (agricultural and trade policy) and to depress the prices of products sold (international trade policy). Moreover, the government, through its tax and spending policies, contributes towards cheap power, increased research facilities, and improvement of plant (through tax favors) in the newly industrialized regions. (The much larger rise of federal outlays in the South and Far West than in New England is to be stressed.) Hence, when confronted with the adverse balance of payments, public measures, instead of offsetting, tend to compound the difficulties. In some recent postwar years, the federal government drew net about 1 billion dollars annually (about 7 per cent of the region's income) out of New England.[5] It should be added, however, that insofar as the government, through its various policies, raises the general income, all regions profit; and in insisting upon minimum wage rates tend to deprive the newer industrial regions of a small part of the advantage of plentiful supplies of labor.[6]

It is generally assumed that the older industrial region yields its industries to its newer rivals, and then moves on to more advanced industries. Insofar as the older industries do not require much capital per worker, are widely dispersed (wide dispersal points to strong possibilities of growth of an industry in underdeveloped regions), and require skills that can be transmitted without great difficulty, the underdeveloped regions will nurture them. The assumption is that New England and the Middle Atlantic States abandon or lose in tobacco,

[4] *Census of Manufactures*, 1947, I, p. 52; and *Annual Survey of Manufactures*, Preliminary, November 13, 1951, and December 6, 1951.

[5] Cf. my *Economics of New England* (1952), Part II, and *Report of the New England Governors' Committee on the Textile Industry*, 1952, *Report*, Sections 15 and 19, and *Research Report*, Chaps. 15 and 19.

[6] Here we should note the disagreement of two of the pioneers in the field of regional economics. Professor Calvin Hoover held that lower wages are not a necessary condition for the South's capacity to produce for the national market. Professor John Van Sickle disagreed. Agricultural Committee, *Study of Agricultural and Economic Problems of the Cotton Belt*, 80th Congress, p. 688; Report of Joint Committee on the Economic Report, *The Impact of Federal Policies on the Economy of the South*, 1949, pp. 48–49.

textiles, shoe and leather, and concentrate more on chemicals, machinery, metal fabrication, etc. But it is not always clear that the movement is in the desired direction. New England's gains have been in part in the newer and high-wage, high-productivity industries, but frequently at wage rates much below the national level. It is significant that even as the region has moved towards the highly productive industries, her relative wages have fallen. Even the movement towards tertiary (service) industries may reflect the excess labor pressing for employment (e.g., low-wage department stores) rather than a sign of advance into higher paying industries.

From 1919 to 1947, New England added 162,000 jobs in the ten manufacturing industries growing most rapidly, or about 4 per cent of the additional jobs in these industries in the nation, a proportion much below the region's 9-10 per cent of all manufacturing jobs. The figures point to difficulties in adjusting, as do further losses in textiles (*Census of Manufactures Reports,* 1919 to 1947, and 1952 *Annual Survey of Manufactures,* Release *New England States,* November 18, 1953).

IV

As the newer industrial regions grow, it might be expected that their incomes would rise relatively to those of the older regions. The rise of income would result in large part from the movement from the farms to the city factories. Insofar as higher incomes result from the changed employment structure, the contribution towards adjustment for older regions should not be large. Higher incomes explained by more workers attracted to textiles from farming in the South do not help greatly to solve New England's problems. But insofar as the higher income reflects a relative increase in the costs (e.g., labor, cost of living), suggesting the pressure on costs of the industrialization process, the balance of payments of the newer regions suffers: they buy more and sell less.

In general, over a period of twenty years the per capita income of the Northeast relative to the national figure has declined by about 20 per cent. The gains for the South have been about 30 per cent; of the western agricultural and mining states, about 20 per cent (*Survey of Current Business,* August, 1952, pages 11, 16, 17). The great industrial states of the Midwest have roughly maintained their relative position. Advances of the South rest upon industrialization, the improved position of agriculture, and migration; of the western agricultural states, on improved prices for farm and mining products and migration. The relative losses of the Northeast are the result of the improved status of agriculture (unimportant in the Northeast), and the industrial gains of other regions. That the Far West has lost ground relatively in per capita income is mainly the result of the vast in-migration.

## V

Relative movement of incomes is the result of numerous developments. Regions with industries that tend to grow gain more than other regions. Their incomes will rise more. For example, I have compared the percentage of national manufacturing employment in three soft and rather weak manufacturing industries (textiles, apparels, and leather and products of leather) with eight relatively strong industries, and notably in prosperous times and in a military economy (chemicals and allied, rubber products, primary metal industries, fabricated metal, machinery [both electrical and other], transportation equipment, instruments and related). According to the last Census (1947), the proportion of employment in the three weak to the eight strong industries was as follows: New England—83; Middle Atlantic—62; East North Central—10; West North Central—40; South Atlantic—204; East South Central—89; West South Central—32; Mountain—12; Pacific—19.

An examination of these figures suggests that in an economy in which the eight industries are strong and growing, the Northeast would lose ground and the Central States (especially the East North Central) would gain heavily. The position of the South would be especially vulnerable. That this region nevertheless continues to gain is explained by the fact that her position is strong competitively within the industries losing ground in the nation. (By weak I mean here the position of the industries as growth industries in the country.)

In an interesting study ("Contributions of Manufacturing Wages to Regional Differences in Per Capita Income," *Review of Economic Statistics*, February, 1951, pages 18-28), Professor F. A. Hanna showed that the industry mix pulls production wages in the South Atlantic States down from the national average by 12 per cent and her wage rates depress them by 9 per cent below the national level; the corresponding figures for New England are 2.3 and 2.4 per cent. But in the Middle Atlantic and East North Central these variables pull wages up.

Over the years 1899 to 1951, the three "weak" industries have lost ground relatively speaking:

PERCENTAGE OF EMPLOYMENT

| | 1899 | 1939 | 1951 |
|---|---|---|---|
| Textiles, apparels and shoes | 28.5 | 20.7 | 19.4 |
| Chemicals, petroleum, and rubber | 4.6 | 6.6 | 7.5 |
| Primary metals | — | 8.6 | 8.6 |
| Metals, machinery, instruments, etc. (five major industries) | — | 24.0 | 33.1 |

SOURCE: *U. S. Census of Manufactures*, 1947, II, various pages; and *1951 Annual Survey of Manufactures*, Advance Report, Series MAS 5/24, March 11, 1953, page 7.

This is the general pattern of gains in the industries growing relatively in the nation and of losses in the weaker industries. Even in the South Atlantic, textiles declined as a percentage of the region's employment by 15 per cent and leather by 25 per cent. Large relative gains were registered in machinery and transportation equipment. But gains were also large in industries dependent on raw materials: lumber, paper, chemicals, stone, glass, etc.

In summary, most regions, developed or underdeveloped, suffer relative losses in the weak and gains in the strong industries—measured either as a percentage of the nation's or the region's employment. But of course the developed region tends to lose more and gain less. Confronted with losses in manufacturing (absolute in depression and relative in booms), the older region turns more to tertiary industries. (Note the rise of 84,000 jobs in government for New England from 1947 to 1953.)

It has been noted that income differences persist. Indeed, continued movements of labor out and management and capital into the lower income regions should greatly reduce the differentials. But the effect may well be that in the regions not favored by rich resources, able managers, skillful workers, etc., the result would be large relative, if not absolute, declines in population. The price of maintaining a large population may well be a reduced relative standard of living, reflecting the relatively low productivity of the region.

In a table below, we present the percentage of income (wage and farm) falling to various employments in 1949 and the change in percentage points from 1929 to 1949. In the space available, I can only stress a few features of this table.

1. Manufacturing is especially important relative to the national structure of employments in New England, the Middle East, and the Central States, and of small significance in the Southwest and Northwest. But the large gains in twenty years have been in the Southeast, Southwest, Central, and Middle East, in that order. New England's gains were small indeed.

2. The Far West, with the highest per capita income, also has the highest percentage of employment in noncommodity producing industries (61.25); and the Middle East with 56.60 per cent employment in these industries also combines a high value for these industries with a high per capita income; but the high-income Central States have but 46.22 per cent of employment in these industries; and the South's percentage, with low incomes, is higher than New England's. Gains in noncommodity producing employments do not necessarily accrue to the high-income regions.

RELATIVE IMPORTANCE OF MAJOR INDUSTRIES IN THE REGIONAL AND NATIONAL ECONOMIES, 1949, AND CHANGES IN PERCENTAGE POINTS, 1929 TO 1949

| | U.S. | | NEW ENGLAND | | MIDDLE EAST | | SOUTH EAST | | SOUTH WEST | | CENTRAL | | NORTHWEST | | FAR WEST | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1949 | % Points Change, 1929 to 1949 | 1949 | % Points Change, 1929 to 1949 | 1949 | % Points Change, 1929 to 1949 | 1949 | % Points Change, 1929 to 1949 | 1949 | % Points Change, 1929 to 1949 | 1949 | % Points Change, 1929 to 1949 | 1949 | % Points Change, 1929 to 1949 | 1949 | % Points Change, 1929 to 1949 |
| Gross wages and salaries plus net income of farm proprietors, to total | 100 | 0 | 100 | 0 | 100 | 0 | 100 | 0 | 100 | 0 | 100 | 0 | 100 | 0 | 100 | 0 |
| Agriculture (proprietors income plus wages and salaries) | 10.62 | − .86 | 3.33 | − .37 | 2.74 | − .29 | 17.70 | −7.68 | 22.89 | −3.02 | 10.83 | − .14 | 29.02 | −3.88 | 9.79 | −1.65 |
| Wages and salaries: | | | | | | | | | | | | | | | | |
| Mining† | 2.08 | − .69 | .15 | − .14 | 2.58 | − .99 | 2.40 | − .18 | 6.43 | −1.89 | 1.06 | − .37 | 3.23 | −1.74 | 1.10 | −1.25 |
| Construction‡ | 4.69 | − .40 | 4.22 | −1.91 | 4.49 | −1.77 | 4.55 | 1.28 | 5.24 | .75 | 4.25 | − .71 | 4.93 | 2.58 | 6.31 | 1.58 |
| Manufacturing† | 30.00 | 1.84 | 41.16 | .31 | 33.59 | 2.77 | 23.01 | 3.77 | 12.87 | 2.40 | 37.63 | 4.03 | 11.49 | 1.15 | 21.55 | 1.28 |
| Above 4 commodity-producing industries | 47.39 | − .11 | 48.86 | −2.11 | 43.40 | .28 | 47.66 | −2.80 | 47.44 | −1.75 | 53.77 | 2.82 | 48.67 | −1.89 | 38.75 | − .04 |
| Trade¶ | 17.53 | 2.30 | 17.42 | 2.03 | 18.66 | 3.19 | 15.66 | 3.17 | 16.79 | 1.34 | 16.77 | 1.18 | 16.32 | 2.53 | 20.03 | 2.59 |
| Transportation† | 6.54 | −1.74 | 4.84 | − .20 | 6.59 | −1.20 | 6.60 | −3.52 | 7.39 | −2.30 | 6.48 | −1.90 | 8.33 | −1.70 | 6.19 | −2.13 |
| Power and gas† | 1.15 | .02 | 1.16 | − .01 | 1.18 | − .16 | 1.01 | .21 | 1.36 | .20 | 1.16 | .04 | 1.10 | .23 | 1.12 | .18 |
| Communications‡ | 1.43 | .21 | 1.50 | .39 | 1.63 | .10 | 1.13 | .25 | 1.32 | .36 | 1.28 | .19 | 1.30 | .33 | 1.74 | .33 |
| Finance, industry and real estate‡ | 3.56 | −1.43 | 4.22 | − .83 | 4.65 | −2.21 | 2.80 | − .48 | 2.86 | .06 | 2.96 | −1.13 | 2.50 | − .48 | 3.82 | −1.59 |
| Federal government‡ | 5.47 | 3.18 | 4.09 | 1.96 | 5.57 | 3.12 | 8.30 | 5.17 | 7.17 | 4.23 | 2.93 | 1.44 | 6.30 | 3.06 | 7.82 | 5.17 |
| State and local governments* | 6.54 | .30 | 6.89 | .45 | 6.29 | .38 | 6.65 | .46 | 6.20 | .04 | 5.97 | .08 | 6.98 | − .50 | 8.25 | .26 |
| Services* | 8.46 | − .86 | 9.41 | .12 | 9.92 | − .72 | 8.19 | −1.32 | 6.75 | − .56 | 7.03 | − .83 | 6.09 | − .27 | 10.40 | −2.22 |
| Miscellaneous* | 1.95 | −1.85 | 1.61 | −1.80 | 2.11 | −2.24 | 1.97 | −1.14 | 2.71 | −1.61 | 1.64 | −1.72 | 2.43 | −1.23 | 1.88 | −2.55 |
| Above 9 noncommodity producing industries | 52.62 | .12 | 51.14 | 2.11 | 56.60 | .27 | 52.34 | 2.80 | 52.56 | 1.75 | 46.22 | −2.83 | 51.35 | 1.90 | 61.25 | .04 |

* Lowest earnings industries.
† High earnings industries.
‡ Medium earnings industries.
¶ Wholesale: high earnings; retail: medium earnings.
SOURCE: Adapted from *Regional Trends*.

3. Note the large gains in federal employment—and particularly for the underdeveloped regions.

4. In these twenty years, federal government and miscellaneous employments, mining, and trade especially gained; transportation, finance, industry, and real estate, services and agriculture have especially lost ground relatively. Obviously, regions with heavy employment in these "declining" employments tend to lose ground relatively.

Economic changes in the last twenty years point to the kind of adjustments that have to be made. The regions suffering losses in their major industries offset these losses to some extent by capturing part of the additional employment in the growing industries. But it will be found that their gains in all manufacturing industries are less relatively than their stake in all manufacturing industries. What is more, their losses will often be large in some of the growing industries. In the developing regions, one will find also that the gains are relatively larger in many industries besides the less advanced industries (e.g., textiles). Under this pressure, New England, for example, will increase its employment in tertiary industries; but in contrast to the Middle East and Central States, also important industrially and gaining ground relatively since 1929 in industry, New England does not increase the proportion of employment in secondary industries. And in contrast to these two other great industrial regions, New England must seek offsets in large substantial relative gains in noncommodity producing industries.

## VI. *Summary and Conclusions*

In a dynamic economy, some regions are bound to grow more rapidly than others and, in the process, to capture some of the industries of the older regions. All that the older regions can ask is that the transitions be eased as much as possible; and above all that they should not be made more difficult. Unfortunately, government and, to a lesser extent, trade-unions have made the adjustments much more difficult than they need be. New England has especially suffered as a result; but the interests of the Middle Atlantic States and the Central States are also involved. Large military and other government outlays have obscured the extent of the adjustment problem and put off to some extent the day of reckoning. The importance of military outlays is especially great for the heavily industrialized Middle Western States, where the concentration on heavy and unstable industries is especially dangerous (67 per cent of the manufacturing employment in eight major industries closely related to the military economy as compared with 34 per cent in New England and 28 per cent in the Middle Atlantic States). Moreover, employment in these eight strong industries relative

to three weak industries was eight times as high in the Central States as in New England.

Regional trade is much more important in dollar value than international trade. Tariffs, exchange restrictions, and differences in language, institutions, etc., do not hamper trade as they do international trade. Hence the loss of an industry or markets to another region may be telescoped into a relatively brief time. But whereas no government would allow marked penetration of a market by a foreign country over a short period with the ensuing hardships, the United States government has gone out of its way to aggravate the regional adjustment problem.

Not only has the government over the last twenty years, by pouring money into the low-income states of the Southeast and the agricultural Northwest, slowed up the migration from these states to higher income states (e.g., New England obtains 4.09 per cent of its major income from the federal government; Central States, 4.23; Middle Atlantic, 5.57; but the Southeast, 8.30, and the Far West, 7.82), but even as older regions were losing ground, the federal government, through outlays on research, on power, offer of special tax favors, through its farm pricing policies, through its tariff policies (cutting tariffs on manufactured goods and raising them on agricultural products)—through all of these the government was accelerating the losses of the developed regions and putting too great a burden on the adjustment process.

Trade-unions, insofar as they were strong in the developed regions and weak elsewhere and thus tended to keep wages up in the Northeast and Middle West and allowed them to fall relatively in the South, had effects similar to government.

It is well to be clear that the great industrial regions have to pay for their food and raw materials by exporting goods and services. That New England's relative employment in agriculture is but 31 per cent of the nation's (i.e., roughly 3 per cent when the national average is 10 per cent) and the Middle East (New York, Pennsylvania, etc.) but 26 per cent, suggests that these regions must export manufactures and services to pay for food and raw materials if they are to survive as populated areas. In order to export, they must, in the face of new competition, cut prices relatively and eventually wages or (what is difficult in view of the great advantages of the underdeveloped regions with special access to construction of most modern plants and use of newest techniques and their almost fanatical determination to industrialize) reduce unit costs through a relative rise of productivity. Failing here, they must find alternative employments. There is evidence that some of these adjustments are made but very slowly and with long periods of unemployment (obscured to some extent recently by government spending policies). Evidence of some adjustment is found, for

example, in the relative reduction of wages in New England. Nor do incomes and prices rise sufficiently in the developed regions to provide adequate alternative markets for developed regions—in part because the large surplus labor supplies tend to depress wages.

Government and unions alone are not responsible for the high costs of adjustments as older regions lose industries. The movement of labor and capital into new industries is altogether too slow, partly because capital and management do not seek out adequately the depressed towns or regions. But perhaps even more important is the fact that the export adjustments have to be concentrated on a small part of the region's economy. A large part of the employment of the region is in domestic industries; and even in manufacturing, a large part is tied to the location of raw materials and markets. Hence, in a peacetime economy it would not be easy for New England to find substitute employments and exports for textiles and shoes, or the Middle East for textiles, tobacco, and metals, or the Central States for metals, machinery, etc.

# REGIONAL ECONOMIC ADJUSTMENTS: THE ROLE OF GEOGRAPHICAL WAGE DIFFERENTIALS

*By* JOHN V. VAN SICKLE
*Wabash College*

Our President has asked the participants at this year's meetings of the American Economic Association to discuss the impact of modern business practices upon policy making.

In this particular session we have been asked to re-examine the problem of interregional adjustments within the United States and with particular reference to the role of geographical wage differentials. Wrote President Hoover:

> I am planning a session on Regional Economics dealing with the whole subject of wage differentials in a modern complex economy. As you know, the matter of wage differentials is once more in the public mind in connection with the fixing of minimum industry-wide wages under the Walsh-Healey Act. Likewise the report, in late November, of the New England Governors' Committee on the New England Textile Industry . . . has increased interest in the question.
>
> I wonder whether you would do a main paper. Some questions come to my mind that we might try to cover. 1) Assume that we agree that if there were substantially pure and perfect competition in the determination of all relevant prices and wages that there should be no governmental action to eliminate wage differentials. Is the situation changed substantially if pure and perfect competition does not exist? 2) Do we believe that there are actually sufficient imperfections and impurities as departures from the competitive model to present us with a substantially different case? 3) Suppose we decided that in any event the government should not take action to reduce or eliminate differentials; suppose, however, that labor unions proposed to eliminate differentials and had the power to compel this. Should we then advocate governmental action to forbid labor unions to take this action? 4) As a general question does it still have meaning if we speak of wages rates as they now exist being "marginal productivity wages"? Suppose then that a new wage were set through the power of labor unions over against manufacturing corporations. If this wage were 10 percent higher would this still be a "marginal productivity wage"? Or suppose the 10 percent increase is due to governmental fiat of some sort or other. Is this also a "marginal productivity wage"? But how different would these wages be from what exists now?

May I say at the outset that I agree with the first of Mr. Hoover's assumptions (i.e., that interferences with the competitive formation of wages would be contrary to the general interest if the American market were a perfect market); that I disagree with his second assumption (i.e., that the departures from the competitive ideal are so great as to vitiate the conclusions drawn from the theory of perfect markets). It follows of course that I regard the Fair Labor Standards Act, the Walsh-Healey Act, and the practice of industry-wide collective bargaining as contrary to the general interest.

*The Order of the Argument.* To support this "reactionary" position I shall develop my argument as follows: first, I shall describe the geo-

graphical pattern of wages to be expected in a national market which is reasonably competitive; second, I shall defend the thesis that the resulting geographical wage differentials promote regional adjustments which are socially desirable and economically sound; third, that the American economy is or can easily be made sufficiently competitive to justify our reliance on geographical wage differentials as one of the essential mechanisms for promoting regional specialization on the basis of comparative advantage; and, finally, that fiat alterations of the geographical pattern result in a less than optimum use of the nation's human and material resources and hence prevent us from enjoying all of the material fruits which private competitive capitalism is capable of yielding.

This position does not imply that the personal distribution of the national income is socially just. One can be a radical egalitarian and still hold this position. All that it implies is that fiat alterations of the geographical pattern of wages are not the best way of promoting whatever pattern of personal income distribution you happen to hold to be socially desirable.

The problem of regional adjustments within the United States is similar to the problem of adjustments between countries. As I see it, the theory of interregional and international trade as developed in Bertil Ohlin's Harvard doctoral dissertation, *Interregional and International Trade* (1933), provides the appropriate kit of analytical tools. It differs from the Ricardian theory in that it allows for the effects of interregional movements of capital and labor as well as for the effects of commodity movements in the narrow sense. Ricardo's views regarding capital movements are to be found in the following statement: "Feelings which I should be sorry to see weakened induce most men of property to be satisfied with a low rate of profits in their own country, rather than seek a more advantageous employment for their wealth in foreign nations." No allowance for international labor movements was provided for in his theory. Ohlin, on the other hand, allows for both capital and labor movements.

As far as interregional adjustments within the United States are concerned, Ohlin's assumptions are in accordance with the facts. Workers probably move more freely from one part to another of the extensive territories making up the United States than they do within the much smaller territories of most other national states. Capital of course is extremely fluid within the United States; our Federal Reserve System, the credit agencies of the federal government, and big business have greatly reduced the significance of geographical interest rate differentials as a means of promoting interregional capital movements.

Nonetheless, interregional labor movements are so sluggish compared

to interregional capital movements that we are justified in basing our concept of economic regions on labor market areas.

*What Is a Region?* A region, from a strictly economic point of view is a consolidated area within which the resources (human, natural, and artificial) on which the population must depend—in the absence of outside aid—result in a pattern of factoral rewards which sets it off from adjacent areas. The persistence of a pattern is due, of course, to the fact that labor and entrepreneurship are not completely and perfectly mobile.

Obviously this definition gives us not just a handful of regions but literally hundreds of regions. Any grouping of these regions into consolidated areas such as the old South, or New England, or the Far West conceals the rich regional mosaic of American economic life. Parts of Maine, New Hampshire, and Vermont resemble parts of the rural South much more than they do the highly urbanized and industrialized parts of Massachusetts, Rhode Island, and Connecticut. The conventional regions of the United States are really expressions of historical, cultural, and sociological factors rather than strictly economic factors.

All that can be said is that there is probably greater labor mobility between small economic regions within the larger conventional regions than there is between the conventional regions.

*The Regional Wage Pattern.* Given this narrow concept of an economic region, it is obvious that most of the economic activities of a region are oriented toward extraregional markets. The level of living —the number and the variety of the goods and services at the command of the local population—depends almost entirely on its export-oriented industries.

Over any short period of time the pattern of factoral rewards that tends to prevail in a region depends on the proportionality of the factors present in the region and what may be called their natural or internal rates of increase. The natural resource base may be regarded as fixed for the time span under consideration. The change in the labor supply depends on the age composition of the population and the ratio between entry into and retirement from the labor force. The change in the capital supply depends heavily on the general level of incomes in the region, its distribution and upon the saving and spending patterns in the region. Internal changes in this factor—the capital supply—are not as important as internal changes in the labor supply because of the very high interregional mobility of capital. The local capital supply affects primarily the cost of loanable funds to the small firms serving primarily the local regions—firms too small to tap the national capital market. For these firms there may be significant regional differences in the cost and availability of loanable funds.

A predominantly agrarian region tends to have a high natural rate of

increase in the local labor supply, a low general level of incomes, a low rate of domestic savings, and a work force that is predominantly unskilled or semiskilled for nonfarm purposes. Conversely, a highly urbanized region tends to have a low natural rate of increase in the local labor supply, a high general level of income, a relatively high rate of internal savings, and a work force with a relatively large proportion capable of performing semiskilled, skilled, and white-collar jobs.

Economic regions shade into one another imperceptibly, varying from highly urbanized and industrialized regions to predominantly agrarian regions centering around small towns which provide services for their immediate agricultural hinterlands. Within the agrarian regions the level of per capita incomes depends heavily on the quality of the resource base, the net fertility of the farm population, and the effectiveness with which past migration has drained off the excess population which appears to be associated with farming as a way of life. If the rural South can still be regarded as a single and distinctive economic region, this is due primarily to a net fertility rate that is still considerably higher than in other rural areas and to inadequate migration.

Farming is still the single most important industry within the old South. The marginal productivity of farm workers in this region is necessarily very low—substantially lower than in any of the other predominantly agricultural regions of the United States—and the high fertility of the farm families tends to maintain the disparity.

The farm situation imposes a distinctive pattern of wages throughout the old South and indeed exerts some influence on the patterns in all other parts of the country. Manufacturing firms locating in the small towns in the rural South can hire unskilled labor at lower rates than can firms located in other parts of the country. This fact tends to attract to the South business operations which can make effective use of this type of labor and of the raw materials which climatic and soil conditions favor: cotton, turpentine, citrus fruit, lumber, etc., etc. All that such firms have to pay is enough to induce unskilled labor to transfer from the nearby farms. The supply of skilled, clerical, and managerial labor, on the other hand, tends to be relatively scarce and hence expensive. The result is a structure of wages starting from a relatively low base and exhibiting larger differentials between the lowest and the highest rates than is characteristic of highly urbanized and industrialized regions. In between these two extremes, market forces tend to produce a wide variety of intermediate patterns. In general it can be said that in the absence of fiat alterations the patterns tend to be related to the sizes of the communities in which the nonextractive activities of the country are located.

*The Locational Role of Regional Wage Differentials.* In a market

economy this mosaic of regional wage differentials performs an important function. It provides one of the signals which businessmen need in determining the precise location of new capacity or the best place to which to transfer capacity when an original location becomes uneconomical. Insofar as new capacity is needed to supply highly local needs, the location problem does not arise. Local capital, local labor, and local business leadership combine to provide it.

What we are interested in here are the location decisions confronting those who can choose between a number of sites. Each locational decision of this sort is the resultant of a number of divergent forces. The immobility of natural resources pull certain of the processing industries toward their natural resources, particularly if the first processes involve heavy losses in the weights of the raw materials. End-markets and the volume of purchasing power in these end-markets exert a centralizing influence, pulling productive capacity toward existing urban centers. These centers possess a number of other advantages: a relative abundance of local savings and a flexible labor supply which permits management to meet irregular demands on fixed plant.

Offsetting these advantages, however, are costs that tend to vary with the size of the city. In general, large cities are increasing-cost enterprises. Larger per capita outlays are needed for roads, schools, playgrounds, police and fire protection. Building codes have to be more severe than in smaller communities. Space is at a premium. Industrial and residential rents tend to be higher. Workers have to travel longer distances to get to and from the plants. This means time and money and psychic costs, as anyone can testify who has found work in a small community after years of commuting and strap hanging and edging his car through urban traffic. Large-city wages and salaries conceal a portal-to-portal premium. Many personal services cost more—hair-cuts and baby sitters and charwomen. Furthermore, the families in the big cities do not produce the workers which the big cities must have if they are to get their proportionate share of the new jobs provided by a dynamic and growing economy. Hence money wages must be high enough not only to offset higher local taxes, higher residential rents, the portal-to-portal premium, and higher service charges but also to recruit additional workers. Unlike the smaller cities and towns, they cannot limit their recruitment to their immediate agricultural hinterlands. They must offer enough to attract workers from great distances.

These costs associated with urbanization represent a decentralizing force. They screen out of the biggest cities and into cities of intermediate and smaller size economic activities which cannot realize sufficient advantages from these sites to justify their continued claims on the services of the labor and the space they require. The managements of

such firms and their employees will naturally feel that their difficulties are due to the fact that competitive firms located in smaller communities are paying lower money wages than they are forced to pay. They will complain of unfair competition instead of recognizing that the functions they perform should be carried on elsewhere. They are at a comparative disadvantage. A function of competitive market prices is to induce the transfer of these activities to locations in which the pattern of costs—rents, wages, taxes, etc., etc.—is such that they can be carried on profitably and at the same time pay the locally prevailing prices for space, for the types of labor required by the nature of their operations, and their share of the costs of the public services which the community provides.

Until recently the actual geographical pattern of wages was in rough conformity with the pattern which traditional economic theory postulated. Before asking whether public policy should be directed to preserving this pattern, we need to ask whether it serves any useful purposes. Clearly it does. First of all, it induces workers to move from regions in which their marginal productivity is low to regions in which it is higher. Secondly, it provides an inducement for capital to move to areas where its marginal productivity is increased because of its ability to make use of the particular types of labor required for efficient production at lower money rates than those prevailing in alternative locations. The result is a nice balance between the centralizing and the decentralizing forces at work in the economy.

Any general fiat geographical equalization of money wage rates for comparable jobs would destroy an essential part of the price mechanism. The prospects of realizing a pattern of regional specialization based on the principle of comparative advantage could not be realized. The decentralizing forces in the economy would be weakened; the centralizing pulls would be strengthened. The nonextractive activities would be increasingly concentrated in hugh metropolitan centers and the burden of geographical adjustment would be placed predominantly upon labor instead of being shared between labor and capital. At a time when the federal government is seriously considering the need for spending billions of dollars to subsidize decentralization for military reasons it seems rather self-evident that federal interventions in the area of wage determination should not be deliberately biased in favor of centralization.

*Big Business and the Geographical Wage Pattern.* Recent developments have modified the geographical wage pattern in the direction of greater geographical uniformities. In part this is to be expected, for one of the functions of geographical wage differentials is to induce factoral movements of an equalizing nature. But in part the greater uni-

formities appear to have been imposed by nonmarket forces. What has been the role of big business in this development?

Time limitations force me to say, without bringing forward any supporting factual evidence, that in my judgment the managements of large corporations attempt to operate within locally prevailing wage patterns. It appears to be part of the businessman's code that he may strain but he should not break the local wage pattern. If his profit situation warrants he should pay a little but not much more than other local firms —enough to get the cream of the local labor crop and to establish his reputation as a good employer but not so much more as to complicate life unduly for other business firms. If this policy results in large profits and if there is effective competition, the firm will expand. It may elect, however, to expand by setting up a new plant in another local labor market area rather than breaking the local pattern.

This code is objectionable only if it can be shown that the emergence of large profits does not result in expansion. The fact that the expansion does not occur where the profits are made is not important. What is important is that the expansion should occur and should occur in that economic region where the pattern of costs promises to make the investment most remunerative from the point of view of the ownership interests. If the expansion does not occur (within a reasonable period of time), the presumption is that the management possesses effective monopoly power. Public policy should be concerned with the discovery of the forces responsible for this monopoly and the means of eliminating the monopoly and not with ways and means of making it respectable and socially acceptable by helping the workers get a part of it through a wage increase which breaks through the local wage pattern.

*Big Business Is Competitive.* How serious is business monopoly in the American economy? I can only say that I share the views of such careful students of the problem as Schumpeter, Stigler, Wilcox, Slichter, and David Lilienthal, to mention only a few, who hold that the American economy is highly competitive viewed from the point of product disposal.[1] It strikes me that the competition for the consumers' dollars is vigorous and ingenious and that such short-run monopoly positions as firms manage to occupy are largely responsible for product improvements and the technological progress which is peculiarly characteristic of the American economy.

[1] Joseph A. Schumpeter, *Capitalism, Socialism and Democracy* (Harper, 1942); George J. Stigler, as reprinted in A. G. Gayer, C. Lowell Harris, and Milton H. Spencer, *Basic Economics: A Book of Readings* (Prentice-Hall, 1951), p. 211; Clair Wilcox, "On the Alleged Ubiquity of Oligopoly," *American Economic Review,* May, 1950, pp. 67-73; Sumner H. Slichter, *The American Economy: Its Problems and Prospects* (Knopf, 1947), and "The Growth of Competition," *Atlantic Monthly*, November, 1953; David E. Lilienthal, *Big Business: A New Era* (Harper, 1952-53).

But what about monopoly power in the markets in which firms hire their labor? Many economists who admit that American business is on the whole competitive in output markets claim that it is very much less competitive when it comes to hiring labor. The one-industry town is the standard example of monopsony in the competition for labor. It is held that the dominant firm in many small communities is confronted with a rising supply curve for labor. Consequently the cost of hiring a few additional workers is not just the wages paid these workers but in addition the added wages which it is forced to pay to the original labor force in order to eliminate demoralizing intraplant wage inequities. Under these circumstances a fiat intervention which would force the firm in any event to pay the original work force this higher wage may actually make it profitable for the firm to hire more workers than would otherwise be the case. In brief, given the existence of monopsony, oligopsony, and monosonistic competition, it is possible to discover a fiat pattern of wages in most labor market areas that will result in more employment at higher wages, increased output, and lower prices. In the long run, all of these gains, of course, have to come out of profits, since capital is highly mobile and the supply curve for loanable funds is already horizontal as far as these dominant firms are concerned. It is further held that if the fiat wage determination is reasonable, the rate of capital formation and of technological progress will in no wise be slowed down. At this point the theory merges with the Keynesian theory of effective demand, particularly that formulation of the theory that stressed the maturity of the economy and the importance of a high level of consumer demand as the force which makes the wheel of wealth revolve.

There is, of course, truth in this sophisticated theory. But the theory applies to a homogeneous labor market, and when it is applied to broad areas like all of New England, or all of the old South, to say nothing of all of the United States, it is clearly not applicable. There can be no single fiat rate which would be appropriate to the large number of local but highly differentiated labor market areas which make up the broad conventional regions of the United States.

Professor S. E. Harris' study of the New England economy (*The Economy of New England: A Case Study of an Older Area*) brings out very clearly the fact that the adjustment difficulties with which he is concerned are localized. Industry is adapting to changing conditions much more successfully in Connecticut than in Massachusetts and in Rhode Island. Income and industrial employment are increasing faster in Maine, northern New Hampshire, and Vermont than in the old industrial heart-land of New England. The problem varies from commu-

nity to community. Statistical aggregates covering large conventional regions conceal as much as or more than they reveal.

As I see it, the theory of oligopsonistic competition weakens rather than strengthens the case for a high and uniform nation-wide minimum wage applicable to all firms selling in interstate markets, or for Walsh-Healey wage determinations applicable to all firms which undertake to do business with the federal government (contracts involving more than $10,000), regardless of the wage patterns in the communities in which they are located, or for uniform industry-wide wage patterns determined by a collective contract.

This theory is a monument to the intellectual ingenuity of the academic economist. Like Keynes's theory of effective demand, it has been seized upon, violated, and forced into the service of protectionism and restrictionism.

*Big Labor and the Geographical Wage Pattern.* Big business, as I see it, is, on balance, highly competitive; it respects the natural geographical pattern of wages, plans its operations on the basis of the existing pattern, and in the process brings about interregional movements of factors that modify the pattern in the direction of greater geographical wage uniformities for comparable jobs. Can the same thing be said of our great national trade-unions?

It seems to me that the answer is clearly "no." The code of the successful labor leader as regards geographical wage differentials is entirely different from that of the successful businessman. He is engaged in an intensive rivalry with other labor leaders for position for his union in the industrial wage hierarchy. He accepts as inevitable for the time being interindustry wage differentials, but he feels very strongly that the wage rates for comparable jobs in the plants within his jurisdiction should be equal regardless of the size or the location of the plants.

Being a realist he is content to nibble away at these interplant differentials but his objective is their complete elimination. How successful a strong union can be in narrowing geographicals before they have accomplished their function can be seen by anyone who will study the record of industry-wide collective bargaining in Great Britain or Sweden, or in the iron and steel industry, or the railroads or in the coal mining industry in this country. The North-South wage differential has been practically eliminated in these industries. The result is that an unskilled worker in the Birmingham plants of the Tennessee Coal and Iron Company (a subsidiary of the United States Steel Corporation), though he can do no more than sign his name, now makes substantially more than those employed by most of the firms in that labor market area.

These great unions are not subject to the disciplines of the competitive market to the same degree as are the managements of our giant corporations. Their leaders possess the power to close down vital industries in pursuit of their objectives. The managements of big business do not possess any such power and would not dare exercise it, if they possessed it.

The existence of geographical wage differentials contributes to the maintenance of competition in the United States. This competition is tough. It is bearable only if resource owners are prepared to make frequent small adjustments. Many of the interventions of the federal government have, as Professor Harris has shown (*op. cit.*), made the adjustment problem for New England more difficult. But I cannot agree with what I understand to be the remedies which Professor Harris proposes in this same study. At the risk of oversimplification, his recommendations appeared to be: (1) that the New England governors and the New England representatives in Congress should be more diligent in their pressure for increased federal spending in the region; (2) that the federal government should use its taxing and spending power and its power to regulate interstate commerce to secure a higher minimum wage, to encourage the spread of strong and militant trade-unionism into the South, and to induce the southern states to shift more of the burden of local taxation onto property and business profits. All of these recommendations are for the purpose of mitigating the severity of interregional competition. Professor Harris does not definitely recommend higher Walsh-Healey wage determinations but he cites the fact that at the time of writing estimated wages in New England were about 19½ cents above the minimum on government contracts set under that Act for the cotton textile industry. I judge that he would be sympathetic with the idea of using this Act to exclude from the lucrative field of government contracts the large number of small plants in small communities that abound not only in the old South but in many other parts of the country.

Now my recommendations would run in quite a different direction. First of all, I would recommend that the federal government cease to use federal aids for the purpose of regional equalization. I think that the people in the several states should assume the responsibility for supporting the services which they wish to see performed by their state and local governments. To the extent that federal aid is continued, its geographical incidence should be neutral. In return, however, the federal government should cease trying to impose upon the low-income states wage patterns which do not conform with those which would result from the operation of competitive market forces. What low-income economic regions would lose in federal aid they would more than recoup

through their increased ability to attract extraregional private risk capital. I can see no reason why states that are long on labor and short on capital should not be allowed to develop local tax systems that bear lightly on the scarce factor. This seems to be a sensible way to encourage domestic capital formation and also extraregional capital investment.

As regards the Fair Labor Standards Act, my first preference would be that it be repealed entirely. If that is politically impossible, I would recommend that it be left as it is. Inflation has rendered it innocuous. Any uniform rate, if left alone, is like an old tariff rate. The economy adjusts to it. In time it ceases to provide any protection for the industries of a region which are at a comparative disadvantage.

As for the Walsh-Healey Act, I would recommend its repeal and failing that a clear statement by the Congress of its desire to have the Department of Labor administer it according to the original intent. My reading of the law and the statements of its sponsors[2] convinces me that the Congress thought that the Act was in conformity with the regional wage pattern which I have defended in this paper as functionally sound. The legal definition of the prevailing minimum wage, it will be recalled, reads as follows:

> . . . all persons employed by the contractor . . . in the performance of the contract will be paid, without subsequent deduction or rebate on any account, not less than the minimum wages as determined by the Secretary of Labor to be the prevailing minimum wages for persons employed on similar work or in the particular or similar industries or groups of industries currently operating in the locality in which the materials, supplies, articles, or equipment are to be manufactured or furnished under said contract. (Paragraph (b), Section 1, of the Act.)

In fact, however, the Department of Labor used, or, more accurately, misused, the law from the very beginning to impose a nation-wide minimum wage which has been consistently higher than that imposed on firms engaged in interstate commerce. Apparently the Department relied upon the following involved opinion provided by one of its legal experts, O. R. Strackbein, in *The Prevailing Minimum Wage* (Washington: Graphic Arts Press, 1939):

> The prevailing minimum wage for persons employed on similar work is an alternative which stands on its own feet, and even though the term "similar work" is not followed by a comma in the text, the word "or" following the term nevertheless acts as a complete disjunctive; and because of change in the verbal sequence from a substantive verb ("similar work") to pure substantives ("industries") after the last pure substantive ("groups of industries") cannot strike back to modify "similar work." The present participle ("operating"), on the other hand, readily reaches through "groups of industries" to "similar industries" and to a particular industry because there is no barrier to halt it. Its influence cannot pass beyond this point, however, because the change in the grammatical structure obstructs it. (Page 65.)

[2] Gerard D. Reilly, Reuben S. Haslam, and Rudolph Modley, "Threat of the Walsh-Healey Act," *Harvard Business Review*, January, 1951; also, John V. Van Sickle, *The Walsh-Healey Public Contracts Act* (No. 445 in the series, "National Economic Problems," published by the American Enterprise Association, 1952).

As to collective bargaining, my own preference would be to return to the states the problem of defining the rights and duties of trade-unions, leaving to the federal government the task of enforcing the antitrust laws impartially against business and labor.

Professor Harris has rightly pointed out that our federal farm program has worsened New England's terms of trade. Here again the economically sound solution is not to try to compensate New England by increased federal aid but rather to get rid of farm price supports entirely or failing that provide very moderate price supports that will give the farmer "catastrophe insurance."

I have not answered all of the questions posed by President Hoover in his invitation to address this meeting. But my time has run out and your patience is exhausted. I can only say in conclusion that as I have viewed the passing scene for some forty years and from observation points in various parts of Europe and the United States and now from a small town in the Middle West, I remain an old-fashioned neoclassical economist, a free trader, and a liberal in the original meaning of the term. I believe that the American economy is so dynamic and competitive that the federal government and only the federal government has the power to shackle it and destroy it. Believing that all our political freedoms are inextricably tied up with our economic freedoms, I can only express the hope that those with a passion for public interventions will rediscover the American states and their political subdivisions, for it is at these levels that we can apply in a fashion consistent with the operating requirements of the private enterprise system many of the subtle and ingenious advances in theory of which we are all rightly proud.

## DISCUSSION

J. Fred Holly: Professor Harris has developed his topic in a most interesting and stimulating fashion. He is to be complimented for this able presentation of the difficulties facing the Northeast in its attempt to maintain its competitive position in the nation. The role of a discussant being what it is, I am compelled to raise issues and become the "devil's advocate." This I shall now attempt to do.

Mr. Harris appears at the outset to favor the regional adjustment process of classical economics. After a brief description of this process, he contends that the expected adjustments do not take place or do so only after costly delays. Some policies of government such as banking policy and government relief and spending policies hamper adjustments; other policies that are classified as favoritism toward developing regions add to the burden of adjustment in the older regions. Reference is also made to the imperfections stemming from trade-union policy, absence of perfect mobility of capital and labor, and unfair competition on the part of the developing regions themselves. In essence he contends that these imperfections and rigidities tend to cause factor and product prices to remain high in the older regions and thereby cause development at an accelerated rate elsewhere.

This reviewer would contend that this analysis is correct insofar as the alleged imperfections are operative. The crucial question then becomes one of value judgment, and here the reviewer's judgment is different than that of Mr. Harris. The following statement appears in the summary of the article: "In a dynamic economy, some regions are bound to grow more rapidly than others; and in the process to capture some of the industries of the older regions. All that the older regions can ask is that the transition be eased as much as possible; and above all that they should not be made more difficult." Thus, it appears that Mr. Harris is using imperfections that would favor the older regions at the expense of the developing regions. To state the issue bluntly: present imperfections are bad because they favor the developing regions but the substitution of another set of imperfections favoring the older regions would be desirable.

We should recognize that the proper goal is the attainment of national full employment and high productiveness. Mr. Harris and others are in substantial agreement on the fact that low-income regions progress relative to the total economy when the nation prospers and decline absolutely when the economy declines. It is also apparent that older regions, such as New England, can avoid or escape the harshness of many of the problems of readjustment during such dynamic periods. It is in such periods that a region like New England can lose relatively in some lines of economic activity without experiencing absolute declines. Thus it should be apparent that all regions have a vested interest in the maintenance of an expanding economy. Moreover, we should realize that the status of the New England economy is such that adjustment is necessary. To be sure, backward regions will gain relatively as

the adjustment proceeds, but in the absence of such growth the problems of New England would become more difficult and persistent. This line of reasoning further suggests that federal policy relating to economic development should be judged on the basis of its contribution to national prosperity rather than on the basis of alleged regional favoritism. After all, can we maintain an expansion of national productivity when vast areas of the nation are inhabited by large numbers of people with low incomes? It is difficult to justify the cries of anguish coming from an advanced region that is more than maintaining its absolute level of economic activity during a period when less fortunate regions are in the process of catching up. Are we to asssume that the "backward" regions are to remain retarded simply to permit the older and more prosperous regions to maintain their relative position in the national economy? I submit that such a policy of protectionism is bad for the backward regions, the older regions, and the nation. Greater contributions by the underdeveloped regions do not require the geographical redistribution of existing manufactures. But it does require the greater utilization of idle or uneconomically employed resources throughout the economy. When this is achieved, the underdeveloped areas can make more effective contributions to total national production.

In addition to this conclusion concerning the role of public policy in regard to economic development, this reviewer would like to further elaborate on some of the points raised in Mr. Harris' paper. He states that the South has "the artificial advantages given via social security to newer and growing regions, with much less unemployment and lower benefits. . . ." The South is below the nation's average in these and other benefits such as workmen's compensation, but the level is not low in order to permit the South to compete with other regions. Low incomes and surplus population are the primary reasons for such deficiencies. Southern expenditures on education provide a classic example of the dilemma of the South in regard to social and economic progress. The South has one-third of the nation's children of school age but only about one-fifth of the nation's income from which their education can be financed. This means that with outlays for education exceeding the national average expenditure on a percentage of income basis, the South lags on the basis of actual expenditure per pupil. When southern incomes become comparable to national income, these standards will tend to become uniform. To create high artificial standards is to further hinder the progress of the South and the national economy.

The author notes that labor is relatively immobile whereas capital and management move freely. He seems to imply that the solution to this problem would be to immobilize capital and management somewhat. While such protectionist measures are attractive to many in a declining region, it is doubted that they would be wholesome for the economy at large. From the national viewpoint it would seem that the only safeguards needed would be to prevent the overshifting of the factors.

Mr. Harris also contends that trade-unions prevent adjustments in the older regions by imposing the higher wage rates of higher income areas. While this is true, we must not lose sight of the fact that the same situation applies in

regard to the newer regions. The only differences in this regard would seemingly result when the union is stronger in the declining region than in the advancing region. The trends in wage rates and wage changes are in the direction of national uniformity. Moreover, we should recognize that wage rates are not the same as labor costs.

The author gives only fleeting attention to the management factor as a contributor to the difficulties of adjustment in the declining region. His only statement in this regard is that "any inflexibility or lack of venturesomeness or unwise investment policies of management contributes further to the delay in adjustments." This factor is worthy of further exploration, and it is suggested that many difficulties of the New England region can be traced to deficiencies in this area. In fact, Mr. Harris has given considerable attention to this matter in his earlier works.

Further, Mr. Harris states that the tendency is for the new industries in the older regions to avoid the depressed areas of the region. While I have no empirical evidence to the contrary, it would appear that the reason for the depression in economic activity would, in part, determine whether new industries would be interested in locating there. For example, if the depression resulted from tariff policy, as in Waltham, I can see no reason why a firm using labor skills similar to those used in watchmaking would avoid locating there. On the other hand, if the depression resulted from deep-seated labor unrest, religious or racial tensions, or similar causative factors, I can readily see why a new firm might locate elsewhere.

While it is true as Mr. Harris suggests that population movement from southern farms tends to depress wage rates in the South, we should not lose sight of the fact that the South has a high rate of out-migration. In the decade 1940-50, the South lost 2,114,000 people, or 7.5 per cent of the population, through out-migration. This population loss has greatly stimulated the rise of southern wages and incomes.

In regard to New England's balance of payments, Mr. Harris comments that the federal government, in some recent years, drew net about 1 billion dollars annually out of New England. Since New England continues as a high-income region, is this drain not in keeping with ability to pay? As I recall, Mr. Harris in his earlier works has emphasized the desirability of federal reliance upon income taxation and recommended ability to pay as a principle of taxation. His present position seems inconsistent against this background.

Mr. Harris has given us a good description of the difficulties that are encountered by a declining region in a dynamic economy. A backward region that is undergoing development also finds that it encounters many imperfections and rigidities that make the process of adjustment more difficult. While time does not permit analysis of such problems, perhaps one illustration of the point will be in order. The South, which desperately needs further industrial development to raise incomes and permit the improvement of local facilities and services, finds that the absence of such improvements is in itself a road block in the way of further industrialization.

In conclusion, I am in agreement with Mr. Harris on the use of subsidies and special inducements as an attraction device in any region. One of my

case studies in economic history emphasizes the need for planning, since industrialization alone will not solve all problems. Further, the need for planning cannot be escaped by relying on grants-in-aid and similar attraction devices to overcome area deficiencies; such grants are questionable since they have the effect of rendering the community less financially able to meet the increasing demands on the government. Groups interested in industralizing an area should carefully calculate and evaluate the effects of industrialization; they should then formulate and institute a planned program for economic development prior to the inauguration of any promotional campaign for the attraction of industry. In no other way can the area prepare itself to cope with the complex and widespread economic and social problems nurtured by the process of economic transformation.

Perhaps Mr. Harris and I are not as far apart regarding the problem of regional adjustments as my statements would seem to indicate. The major area of our disagreement is in regard to other matters. What I have attempted to do is to show that developing regions have serious adjustment problems as do the older regions. Yet we should look at industrial development not in terms of its regional aspects but rather in terms of its relation to national productivity. Finally, it might be well to emphasize that neither Mr. Harris nor I have given much direct attention to the perplexing social consequences of industrial growth and decline.

BEN A. ROGGE: In line with the general topic of interregional competition as distinguished from intraregional competition, I shall direct my attention to the paper presented by Professor Harris, of Harvard, rather than to the one presented by my colleague, Professor Van Sickle. Yet even this is misleading because I have no real quarrel with any direct statement in the Harris paper. Here is no horseback or John Gunther-type survey of the New England economy. Here is a carefully planned, carefully documented study of actualities and potentialities. It is an excellent piece of work.

I was disappointed only in the fact that time limitations made it impossible for Professor Harris to add to his paper a more complete analysis of the significance of his findings, particularly a more explicit statement of the implications of his findings for the purposes of policy making.

Like the students in my own classes, I am impatient for answers. What should be done about it? Should minimum wages be raised? Should our tariffs on manufactured goods be increased? Should the price support program in agriculture be eliminated or modified? Should the government avoid regionally directed programs such as the TVA? Or should New England interests press for more of such programs in their own region? Should steps be taken to reduce the power of the trade-unions in New England and/or to increase the power of the unions in the South?

I must constantly remind my impatient students that such questions cannot be answered with a simple yes or no. Yet I cannot resist the temptation to press them on a man so clearly fitted to give reasoned answers.

I would be content with Professor Harris' own thinking on the implications of his findings re the central question of these meetings: Are the analytical

and policy models of orthodox, classical economics relevant to the world in which we now live?

In his opening paragraphs Professor Harris seemed to be saying that at least the space-adjustment models of classical economics are not valid descriptions of real events. Yet I cannot escape the personal conclusion that the Harris paper, in its total effect, is a substantial witness to the relevance of the classical apparatus.

Let me attempt to support this thesis first with reference to the general policy orientation of classical economics. The central policy preachment of classical economics is that the man who would evaluate the impact on human welfare of any given economic action should keep his gaze steadily fixed on its long-run effects on the interests of consumers. In other words, he should not let his evaluation of the action be unduly influenced by its short-run effects, whether good or bad, on particular producer groups.

Professor Galbraith challenged this orientation in his remarks in another paper presented at these sessions. He insisted that a wealthy society can well afford to moderate the short-run position of disadvantaged producer groups in the interests of minimizing social conflict and unrest. It seems to me that Galbraith's thesis rests on an inadequate interpretation of the classical position. The classical position is that an intervention designed to aid a particular producer group not only will reduce consumer real incomes, which might in and of itself be tolerable, but, even more important, it will almost always add to the burden of other producer groups. These groups then will need aid, will be potential sources of social unrest, and the logical outcome is an ever widening pattern of protection to domestic producer groups. This in turn will make it necessary to protect domestic producer groups from foreign competition, thus enhancing international conflicts. In other words, if we constantly yield to the very human temptation to aid disadvantaged producer groups in the hope of promoting social accord, the total effect will be more rather than less social conflict and, of course, a smaller social product. If people are to be given aid, they should be given that aid as individual consumers and not as members of some producer group.

It seems to me that the Harris paper provides considerable support for the classical position. We helped the farmer—and hurt New England. We helped the people of the Tennessee valley—and hurt New England. We helped the worker organize unions—and hurt New England. We raised tariffs on agricultural products—and hurt New England. Now New England is ripe for precisely that kind of social unrest which Professor Galbraith assured us such interventions were designed to prevent.

This does not prove that all such interventions must be discontinued or that none should be undertaken in the future. It means only that we cannot assume that the costs of such interventions are borne solely by the high-level-of-living American consumer or, at worst, by other high-income producer groups. We are discussing today a struggle for capital between the low-income worker of the South and the low-income worker of New England. This is far different from the romantic struggle between the oppressed poor and the rich which is central to the policy models of the modern liberal.

But how can these classical policy conclusions be possessed of some relevance if the models from which they are derived do not fit the real world? That is the critical question. Are the classical models of economic life completely unrealistic? If they are, does it automatically follow that the policy orientation of classical economics is also unrealistic?

For some time now we have had great fun exploding the myth of the pure and perfect market models of classical economics. (See, especially, Richard Lester's *Economics of Labor*, 1941, and Joseph Shister's *Economics of the Labor Market*, 1949.) This accomplished, we have taken what seemed to be the logical next step of ignoring most of the policy warnings implicit in the pure and perfect market model.

Minimum wages hurt the South? Ridiculous. Trade-union wage action produce adverse employment effects? Nonsense. Yet today we are discussing the possibility of using a higher minimum wage as one means of slowing down the industrial growth of the South and the associated industrial decline of New England. We have heard Professor Harris tell us that trade-union work and wage policies have had a long-run adverse effect on the quality and quantity of work opportunities confronting New England workers.

But how can the effects of certain interventions be very similar to those that would be predicted for the pure and perfect market model when that model is so obviously a myth? My own answer in part is that the classical consequences can be shown to follow from models much less demanding than the pure and perfect model. The classical economist has only himself to blame when he sets up straw houses that any child can blow down. But all of us have a responsibility to ask if the classical edifice crumbles when the straw base on which it seems to rest is destroyed. In part answer, I can say that in my doctoral dissertation ("Wage Policy and the Location Industry," Northwestern University, 1953) I found that there were even a number of fairly realistic models in which the lack of validity of such classical assumptions as adequate knowledge and mobility made the classical policy warnings more rather than less significant.

Professor Harris has told us that space adjustments do not seem to be taking place with the speed and smoothness predicted in the models of classical economics. Does this invalidate the classical warning against trying to speed up the process by forcing greater wage uniformity, etc.? Mr. Van Sickle has said no to this question and I am inclined to agree with him.

Am I saying, then, that every warning of classical economics must be accepted as the word of God? Far from it. I am saying only that this brand of economics seems to be more relevant to the present situation than we were willing to admit a few years back. I am suggesting that it might be productive to examine just what types of models will validate the classical policy warnings and then test the realism of those models.

In closing, I might summarize my own reaction to the Harris paper as, "The long run is here and, alas, we are not all dead."

Louis B. Perry: During the period since World War II there has been an increasing emphasis placed on regional economic analysis. Studies have been

made of regional business cycles, defense spending multipliers, capital needs, business costs, wage differentials, business indices, and interregional competition, to mention a few of the areas investigated. These research efforts have emphasized the fact that regional economic changes within the United States are often more significant dollar-wise to the effective functioning of the overall economy than are changes in the international economic environment. A lack of the effective artificial barriers frequently erected between countries means that individual regions are not insulated against adverse economic changes in other regions.

Professor Harris' paper represents an important addition to interregional economic analysis, with particular reference to an area in which much investigation already has been undertaken; namely, North-South competition. At first glance his basic contention that expected adjustments caused by a competitive deterioration in one region as against others will not take place or occur only after costly delays may seem like doing battle with a straw man. The obvious deficiencies in a classical theory which assumes an automaticity of adjustment may seem obvious to most economists and not require any further documentation. Professor Harris, however, has not been satisfied with the current information and empirical generalities extant on this subject but has made additional contributions; to wit: a case study analysis of the operation of certain factors hampering a more fluid adjustment to changes in interregional competition; further clarification of possible reasons for differences in per capita incomes as between regions; the establishment of the tentative and quite narrow limits to that portion of employment, largely in manufacturing, which could provide sources of exports for a region alternative to those in a condition of decline; and the identification of possible areas needing emphasis or changes in public policy.

The deficiencies of the paper, if one can say such exist, relate mainly to omissions rather than to the material presented. Here the necessary restrictions as to time and space undoubtedly have been operative. The broader regional aspects of business cycles in relation to changes in interregional competition have been largely ignored or assumed as involving more of a detailed analysis than could be considered in the present discussion. Further, constructive suggestions have not been made or at least alluded to with respect to what can be done privately or publicly to facilitate regional adjustments to changed interregional competitive situations. Perhaps the suggestions have been left to various regional research bodies such as the college-community groups sponsored by the Committee for Economic Development, chambers of commerce, or various banks. Frequently, of course, the inability to tailor a national economic policy dictated by circumstances external to the nation to suit variations in regional economic conditions may preclude much being done by government in this area. Further, as long as this nation continues to believe in and support voluntary institutions, economic and otherwise, it cannot be expected that trade-unions and management will conduct their activities in ways that will necessarily lead to an improvement in the interregional adjustment process.

Constructive efforts to ease the situation might possibly be taken by the

federal government, however, in those instances where its actions are discretionary and largely local in effect. Within the budget there are always items which can be tailored somewhat to the interregional situation. The practical difficulties involved in such tailoring, however, may be almost insurmountable. Resource development activities, public works programs, and the location of defense installations, for example, are subject to other considerations than just those of facilitating interregional competitive adjustments.

Further, even the regional actions of the central banking authority are open to question here. Professor Harris states that such an authority, "(e.g., the Open Market Committee of the reserve banks) may ease the pressure through pumping money into the region (e.g., through the redistribution of the system's holdings of government securities), that is, through a movement of capital toward the weakened region . . .," but that such a policy interfered with adjustments. Here there is a basic policy question involved. Would a refusal to force capital into a declining region by this process or any other actually help the adjustment? If such a refusal resulted in a tight money market, might price rigidities reduce the volume of trade rather than prices, thus hampering adjustment and possibly causing greater maladjustments and unemployment than otherwise? Could delaying adjustments, by forcing a capital inflow to the competitively deteriorating region, result in lessening the total impact even though prolonging it?

Movements of income are examined by Professor Harris during the course of his analysis of the reasons for the continued existence of interregional income differences. Mention is made of the fact that in the Far West, generally considered to be an underdeveloped region, the scarcity of labor and, perhaps, the abundance of rich natural resources have been responsible for high labor and per capita incomes in a situation in which it would normally be expected that such incomes would be low compared to the national average. He notes, however, that the Far West has lost ground relatively in per capita income in recent years largely as a result of the vast in-migration.

It is interesting to examine a few factors in connection with this decline in per capita income. Population experts can forsee a continuation of a heavy in-migration trend for the next decade. To date, these new residents of the Far West have been predominantly in the younger age brackets, a fact which should tend to alleviate the relative scarcity of labor. However, a closer examination of total population figures for 1940 and 1950 indicates that the Pacific Coast and South Atlantic regions had the highest increase in population in the 50-59 year age bracket in the nation during this period, namely, 33 and 26.8 per cent, respectively, as compared to New England, for example, with 14.5 per cent (U.S. Bureau of the Census, 1950). Further, when one looks at the increases in persons in the 60-64 year age bracket for 1940 and 1950, the figures become 46.3, 28.6, and 19.6 per cent for the Pacific Coast, South Atlantic, and New England areas, respectively. Since people 65 and over generally have lower incomes than they had during their more productive years, an indication of a relatively large future increase in the size of this group in a region would seem to be a factor pointing toward a decline in per capita income.

Thus, a continued high rate of in-migration which will reduce labor scarcity coupled with increases in the size of older groups within the total population, other things being equal, would seem to demonstrate a further decline in per capita income for the Pacific Coast region as compared to the United States. If there is added to this an effective decline in defense expenditures within the region during a period of declining general business activity, the fall in per capita income in the near future could be quite rapid in relation to the nation as a whole. The consequences of such a situation are considered to be sufficiently important to cause the initiation of local studies in Pacific Coast areas in an attempt to find solutions to the problem of unemployment which might develop. Thus far, however, little seems to have been done in pointing out alternative sources of employment for this rapidly expanding population established on a relatively narrow though expanding economic or industrial base.

One last point in connection with the Far West seems appropriate. The California-Nevada area within this region seems particularly vulnerable to a possible rapid drop in per capita income in relation to the rest of the nation during a period of business decline. It has a rather heavy concentration of medium- and low-earnings industries such as finance, trade, and miscellaneous services as compared to the country as a whole. In 1949, only 14.3 per cent of its income was derived from manufacturing pay rolls as against nearly 24 per cent for the United States. (See Paul B. Simpson's *Regional Aspects of Business Cycles and Special Studies of the Pacific Northwest*, published by the University of Oregon and the Bonneville Administration in 1953, page 37.) Although manufacturing has grown in relative importance in the entire Far West and particularly in California, there is a real question as to whether or not too much of it is of a defense and/or noncommodity character rather than in genuine growth areas (such as chemicals, electrical and other machinery, fabricated and primary metal industries, and instruments), which might be able to hold their own in interregional competition, act as deterrents to other factors causing a decline in per capita income, and resist some of the unemployment effects of any recession.

# THE AUTOMATICITY OF FULL EMPLOYMENT UNDER THE ASSUMPTION OF DIMINISHED DEFENSE EXPENDITURES

## INTRODUCTORY REMARKS

*By* GROVER W. ENSLEY, *Chairman*

National security expenditures, including foreign assistance and atomic energy, increased from 18 billion to about 50 billion dollars (annual rate) following the outbreak of the Korean war in 1950. During the last year they have been on this 50 billion plateau.

It is hoped by every one, I am sure, that these expenditures can be reduced during the coming months and years from their present high levels. Regardless of our views as to the wisdom of defense cuts at this time or our predictions as to whether such cuts will actually materialize, we assume for this discussion that such reductions can and will be made.

Our position of free world leadership requires that we maintain a strong economy at all times. A lessening of the intensity of the cold war may justify a gradual and modest reduction in national security expenditures. But in spite of this easing on the military front, we all know that our economic system will be tested, and in the minds of hundreds of millions of people in the uncommitted parts of the world will be compared with that offered by the communistic system. This means that we cannot afford marked deviations from full and productive employment.

All of us, and I think particularly those associated with the machinery of the Employment Act of 1946, are concerned with the automaticity, or lack of automaticity, of full employment during the transition period ahead—as we move to a lower level of national security expenditures.

Rumors are that national security expenditure reductions will be in the neighborhood of 5 billion dollars in the next fiscal year. We cannot forget, however, that significant other adjustments in government programs are presently scheduled to take place: some 8 billion dollars of tax reductions and changes in agricultural price supports, for example, are provided for under present law. A number of government programs are also being reviewed with the possibility of new legislation in the fields of foreign trade, taxation, housing, and intergovernmental relations. If full employment does not automatically continue simultaneously with these scheduled and planned changes in the government's program, we must have available additional public programs to offset, to the maximum extent possible, the recessionary forces which develop.

# MEANS AVAILABLE TO CHECK AND REVERSE A RECESSION

*By* ALBERT GAILORD HART
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The first question to ask about antirecession policy is what kind of recession we are talking about. And we must begin our answer by saying an uncertain recession. Sometime in the next few years, almost certainly, we must face stronger recessive forces than those that created unemployment approaching 5 million at the trough of 1949. But few economists, I venture, are convinced by the forecasts in circulation which purport to show that a deep recession in 1954 is already in the cards. For my part, I hold that the private and public decisions that will validate or refute these forecasts are not yet set; and I suspect that by the time we can distinguish the next recession from a mere wobble, we may be several months into it.

It is fair to assume that the next recession will center on a setback of postponable outlays—and a setback deeper and longer than that of 1949. In1949, construction and producer-durable activity were down only briefly, and in their worst quarter were almost 90 per cent of previous peak levels; while consumer-durable sales were held almost level by a rise of demand for automobiles. We can scarcely expect such good fortune to repeat itself. We must ask whether we can cope with a greater and more prolonged weakening of demand in each durable goods sector than we then experienced, with timing more or less synchronized, and starting from an inventory situation that would be shaky if sales sagged appreciably.

Among the key characteristics of the next recession, we must name the existence of a stabilization policy—and the public's reaction to it. The proportion of the business community and of consumers who regard prosperity as normal must be as high as in 1929. But adverse experience might rather quickly revive the impression that depression is normal. Certainly we do not dare assume our problem away by supposing that public confidence in the basis of prosperity (and in stabilization policy) is so strong as to yield a quick and solid revival from any setback. Rather, we had better assume that the public is ready to be shown that stabilization policy is working.

*Nondurable Consumer Expenditure.* The field where we have the best ground for confidence in stabilization policy is the market for consumable services and nondurable goods. Surprises are possible in this

field, as we saw in 1951. But we are entitled to assume that measures to sustain disposable income in a recession will be effective in sustaining this part of the market for output.

Despite the greater relative stability of this part of the market, its absolute fluctuations can be of decisive importance. In 1929-32, the drop in this type of spending accounted for nearly 60 per cent of the drop in gross national product (measuring in current dollars[1])—or for a good two-thirds of the drop in spending on final products.

With the powerful elements of built-in flexibility we now have, it is likely that no new policy measures are needed to limit the fall in this market to rather less than half of any drop in gross national product. But if the recession is either deep or prolonged, discretionary policy should be able to better this mark considerably.

By discretionary policy, we mean in this case primarily abatements in taxes—withheld income taxes, commodity taxes, perhaps social security contributions. If Congress can be persuaded to decide in advance what pattern of tax cuts to adopt in order to support consumer markets, quick decision is feasible on the depth and timing of the cut. To preserve the anti-inflationary strength of the tax system for future needs and to preserve the healthy test of whether proposed expenditures are worth levying taxes for, I would urge that abatements in such permanently accepted levies as the personal income tax or social security contributions be enacted as temporary—to revert to standard rates presently, unless there is definite reason to prolong the abatement.

There is every reason to believe that such tax cuts will be effective. Remember that the problem here is to help consumers resist a cut in consumption standards. Suppose a rough rule of thumb that tax cuts for this purpose should aim to hold level the flow of disposable income. Since the losses of income in a recession would probably be rather concentrated, most households—with such types of income loss as elimination of overtime, slow collections on receivables, and the like—could and presumably would maintain spending. Among those with a net loss of disposable income, those with volatile profit incomes would probably not cut nondurable spending much unless income stayed down—particularly if government policy included an effective floor under farm income. Most of the cut in such spending would probably be among those hit by layoffs, who obviously could not be compensated by cuts in taxes on the income they did not earn.

[1] In "1939 dollars," the decline here was much smaller, owing to the inelastictiy of supply of food and houseroom. Given reasonably adequate unemployment compensation and relief, we can count on people being reasonably well fed and sheltered even in a major recession. But if we are concerned with the maintenance of incentives to produce currently in the more income-sensitive fields of clothing, recreation, and the like, and to invest in relation to the supply of food and housing, current-dollar expenditure is the better index.

In short, under a successful stabilization policy, the trough in disposable income and nondurable spending should be much more shallow than that in gross national product. As a rough gauge of success, I would suggest that the fall in consumers' nondurable spending (excise taxes, etc., subtracted) should be less than a quarter of the fall in current dollar gross national product and in no case greater than 5 per cent of the pre-recession spending level. If this standard could be met, there would be substantial gains in other sectors. Consumer-durable spending would gain a substantial support. Above all, involuntary inventory accumulation of consumer nondurables would be ruled out, turning off one of the most powerful recessive forces. A symptom of success on this side would be the appearance of negative inventory accumulation figures early in the recession.

*Postponable Expenditures.* In our economy of decentralized decisions, postponable expenditures on consumer durables, producer durables, and construction are harder to influence. We can define a monetary policy that avoids setting up deterrents to purchase; and item by item, we can think of ways to strengthen positive incentives. But short of handing out subsidies on purchases made within a restricted period (a procedure which would risk a complete collapse of business and political morality), we have no reliable way of making the incentives continuously adequate to yield a full employment volume of purchases.

On the side of monetary policy, it is almost universally agreed that in a recession the authorities must avoid putting general pressure on business and consumer credit. Since existing debtors have to be kept under some pressure to fulfill individual contracts, however, some net contraction of loans may result if new borrowers do not come forward; and the authorities may not be able to turn off all pressure for liquidation. It might be a useful precaution to design arrangements for some sort of general slowdown of amortization under existing contracts (especially mortgages) for use in a recession. On the side of public debt management, some hold that in recession the Federal Reserve should aim to "saturate the economy with liquidity" and avoid any measures that reduce liquidity. For my part, I would hold that it was sound policy to take advantage of a recession to fund short-term into long-term debt. The relatively mild adverse effect on liquidity could readily be offset by keeping banks comfortably furnished with excess reserves while reshaping the debt structure to give monetary policy more grip in future booms.

Going over to a sector-by-sector examination of ways to encourage postponable expenditures, the only sector that seems to offer no cause for worry is public utilities (that is, power and telephone; railways are another matter). Here there still seems to be a substantial postwar

backlog: a lack of adequate margins for peak loads and emergencies, and perhaps a widespread postponement of building.

The housing sector I find cryptic. On general principles, it would seem likely that a building boom would put a larger share of the nation's resources into housing than would be needed in a long-term continuous prosperity. Postwar policy has been to treat housing as an emergency sector, implying the need for an eventual cutback, which might come suddenly enough to involve a serious recession. As long ago as 1950, the stock of housing units had caught up with the number of family units and almost everybody marriageable seemed to be married. Yet in the last three years, an almost unabated boom level of construction has not generated any noticeable number of vacancies. Remembering that we are drawing near the time when the upswing of births after the Great Depression will be reflected in a two-decade upswing in the number of young women reaching the age for marriage and that with the growing size of family our existing housing units tend to be cramped, I am no longer so sure that a downward adjustment of the scale of house construction will be called for.

Even with more long-run optimism on housing, however, there is room for a serious compounding of any recession. Any serious growth of unemployment, with the corresponding slowdown of promotions in business, might sharply reduce the proportion of young couples in a financial condition to set up housekeeping at once. The market for houseroom seems to have little price elasticity but considerable income elasticity. If unemployment rose to 5 or 6 million, say, and held there for a year, even a reduced level of construction could generate the crucial 3 to 5 per cent of vacancies fairly rapidly. How much this market would respond to stimulation (after the vigorous pumping carried on ever since the war) seems uncertain. Particularly if a decline of demand carried values of existing houses down while leaving building costs high and dry, a recession originating in housing or elsewhere might produce quite a refractory depression in building.

In automobiles and appliances, we seem quite definitely to have worked through the postwar backlog of demand, and lower sales seem to be forecast by industry. (The sagging of demand for autos might be eased, however, if we could put more resources into roads and parking facilities.) If production of these items is to be more highly seasonal, as seems likely, we will have to enlarge our standard for the average level of unemployment in peak years. Besides, if we have a wider "seasonal business cycle," an unlucky combination of the seasonal downturn in durables with other recessive factors may make our general business situation more vulnerable in the autumn. If the drive for an annual wage expresses forces that work to prevent the restoration of sharp seasonal fluctuations in this sector, economists interested in eco-

nomic stabilization must feel a good deal of sympathy. The implication, however, is a more rapid absorption of new workers into other industries.

The demand for industrial and railway plant and equipment is a very doubtful sector. There seem to be indications that more and more of the defense facilities set up since 1950 are being transferred to general business purposes,[2] and that the defense boom of 1950-53 may have anticipated many later investment needs. Some of the intentions data now available suggest a noticeable slackening of business investment in the second half of 1954. On the other hand, I gather that comparable data a year ago gave the same suggestion for 1953. We may be observing in these intentions data only a tendency to fill in the detail of investment plans less completely beyond the nearest six months, in view of shortened delivery dates for equipment.

The main remedies that catch interest here are tax gadgets. It could be that the termination of excess profits taxation has sustained activity in late 1953 by giving an incentive to pull forward outlays in that ill-defined but important category: "capital outlays charged to current expense." Accelerated depreciation is often recommended as a stimulus. But there is danger that the timing of the results may be perverse. In a period when future profits seem secure (and when a stimulus is consequently not much needed), this incentive may be strong, as in 1951-52. But accelerated depreciation could prove a trap if after the investment was made the company lacked profits to charge the investment against. In a period of doubtful profit prospects, the attempt to accelerate investment by accelerating depreciation might misfire and create an incentive to postpone investment till future profit was more secure. Here a combination of tax gadgets might be more effective. If we increased the period of loss carry-back under the corporate income tax, many a company could be sure of availability of past profits to absorb accelerated depreciation. With a more substantial carry-back (say three years), announcement of accelerated depreciation on investments in the current year could create a powerful incentive to invest now and finance partly out of tax refunds if current profits were weak.[3] Such a combination, incidentally, would give a firm basis for bank credit.

The problem of local public works is also one of decentralized decisions about postponable outlays. Left to themselves, local authorities are apt to follow a cycle-reinforcing pattern. In view of the visible backlog of needs for schools, highways and parking facilities, the idea of a "shelf of public works" has unusually strong appeal at present. But the

[2] This tendency is reinforced by concentration of defense contracts. Contractors who lose contracts completely also lose all incentives to hold modern plant in reserve.

[3] This suggestion arises from a paper by Richard Goode and discussion by Richard Musgrave at a recent professional gathering, though I am not sure either of them would take responsibility for the conclusions I draw.

necessary linkage between local needs and plans and national timing and financing has yet to be forged.

Over all this area, the problem is much illumined by the availability of intentions data. The yearly and quarterly SEC-Commerce series on business investment and the yearly Federal Reserve–Michigan series on consumer durables and housing—though not yet fully tested—are already of proven usefulness. If as rumored the Federal Reserve–Michigan studies can be put on a quarterly basis in 1954, we will score a further gain in our ability to size up the coming year. And I take it we can hope that current studies at the Council of Economic Advisers will at least put us in the way to having a comparable intentions series on public works.

*International Problems.* The most ominous side of the American business prospect is the danger of international disruption from an American slump. Our imports are cycle-sensitive. This implies also that a slump will tend to hit our exporters, since our trading partners have a rather prompt adjustment of purchases to sales. More important, the outside world may find intolerably intense the backlash of what we feel as a rather mild domestic fluctuation. The experience of 1948-49 is particularly disconcerting when we remember that it came during the expansion of an American aid program that took special account of balance-of-payments difficulties. The political consequences of unconcern on our part could be devastating.

The most successful domestic stabilization program I can visualize still leaves room for fluctuations sharper than that of 1948-50. While foreign monetary reserves have been strengthened since then, it is doubtful that the outside world could simply ride out an American recession. The least that should be asked is security against American responses to recession that would accentuate foreign effects. This is far from automatic. Farm policy implies that a recession would lead to dumping of some American products and to intensified import restrictions on products competing with those under price supports. I recently heard an internationally-minded American businessman propose seriously that our future trade agreements should all provide for intensification of our protective arrangements any time our GNP sagged by as much as 5 per cent!

We owe it to our trading partners to give serious consideration to the proposals brought forth by the successive Committees of Experts at the United Nations.[4] Some combination of the suggested measures to

[4] See J. M. Clark, Nicholas Kaldor, Arthur Smithies, Pierre Uri, and E. R. Walker, *National and International Measures for Full Employment* (U.N. sales no. 1949. II.A.3), pp. 94-99; J. W. Angell, G. D. A. MacDougall, Javier Marquez, Hla Myint, and T. W. Swan, *Measures for International Economic Stability* (U.N. sales no. 1951. II. A.2), pp. 17-26; and the December, 1953, report.

provide special dollar funds in a recession, strengthen dollar earning power, make the International Monetary Fund stronger and more flexible, and provide dollar financing for buffer stocks seems urgent.

*General Stabilization Strategy.* The mere fact that we are in a state of shaky prosperity should not worry us too much. Admitting that we have got where we are more by accident than by design, we are very much where a successful stabilization policy should put us. Unless we can learn to keep our psychological balance in face of uncertainty, we are not adapted to life in the present century.

What should worry us is that at this late date we face the prospect of a recession without well-developed plans for meeting one. In fact, if we took at face value the declarations in many quarters about the sacredness of a nearly balanced budget, we would have to say that we planned to deprive ourselves of the benefit of the automatic stabilizers in the federal budget by making drastic outlay cuts and tax increases in case of a slump. It is hard to believe, though, that these measures would have many supporters when the pinch came.

Three types of preparations for a possible slump need to be pushed. (1) There is at least some room for forestalling measures. Experience since the war goes some way to bear out Professor Hansen's contention that the American economy is inflation-proof in the absence of a war or war scare and his inference that policy can afford to err on the inflationary side. If, for example, a moderate expansion of highway and school construction in 1954 proves unnecessary as a support for business, it can probably do little economic damage. (2) There is still some room for improving our automatic stabilizers—especially on the international side, I suspect. (3) Above all, it is urgent to make at least a good start on setting up stand-by measures. After a generation of talk, a practical start on the public-works-shelf idea would scarcely be premature. Planning of effective market-supporting tax cuts, loss carry-backs, temporary acceleration of depreciation, etc., is in order. The whole international side of the stabilization problem needs careful reconsideration in this country.

So long as these urgent jobs remain, economists cannot yield to the suggestion that we avoid talk of a possible recession for fear of damaging "confidence." To sustain confidence by assurances that there is no danger is to risk disaster, as we should have learned in 1930-31. The way to mobilize the powerful forces of confidence to help limit and reverse a recession is to earn confidence by having an adequate substantive policy for dealing with recessions.

# DEFENSE EXPENDITURES AND THE PROBLEM OF DEFLATION

*By* George H. Hildebrand
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Lord Melbourne once said of Thomas Babington Macaulay that he wished he "could be as cocksure of any one thing as Macaulay is of everything." Melbourne's state of mind is also mine when I attempt to gauge the impacts of changing defense expenditure upon the economy in 1954. I shall therefore limit myself to setting out what I think are the main possibilities and to outlining a flexible fiscal-monetary approach to those possibilities—an approach guided by certain principles and objectives which I have chosen regardless of their political value.

We are now in the midst of an important, as yet little noticed, experiment in the management of our economic affairs. Its essence is an attempt to maintain an expanding economy of private enterprise despite a gradual withdrawal of large-scale supporting federal expenditures. The principal means for the experiment are substantial tax reductions coupled to easy money, applied to a system now free of several former direct controls. The hope clearly is that spontaneous increases in spending for private investment and consumption and by state and local government will keep the present boom going. Some precedents may be found in the current Canadian, German, and British prosperities.

What is novel about the experiment is the attempt to promote this special kind of a boom by the use of the new fiscal and monetary knowledge acquired in the past twenty years. Up to now, this knowledge has been employed either in a context of deep depression or of war inflation and its aftermath. In the more remote past, prosperities were founded mainly upon private spending and were accompanied at their termini by perverse contractions of money supply and by strivings for annual balance in low-level federal budgets. Today we know what damage these policies can do.

Experiments in human affairs are never definitive. Yet the outcome of this particular experiment ought to indicate in some measure whether there is sufficient driving power in the private economy to permit its growth to be stabilized within tolerable limits by consciously applied fiscal and monetary methods.

That 1953 was a boom year requires little elaboration. As of the third quarter, gross national product was running at an annual rate of 369 billion dollars, 6 per cent over 1952 at almost constant prices and with unemployment at the very low rate of 2.5 per cent of the civilian labor force. Gross private domestic investment reached an annual rate of 56.5 billions in the third quarter.

Up to now the boom is over three years old. It has been powerfully stimulated by a rapid rise in federal expenditures on national security (defense, foreign aid, and atomic energy). In calendar 1950 these totaled 18.5 billions. As of the third quarter of 1953, their annual rate was 52.1 billions. Thus the average annual rate of increase in security spending after 1950 has been 11.2 billions in current prices. The injections have been large, reaching 14 per cent of gross product this year, which is very close to the 15 per cent "savings offset" afforded by private investment. Moreover, cash deficits occurred in 1952 and 1953, and in their financing they added to outstanding money supply.

Beginning in fiscal 1953-54, a long-term effort has been undertaken to balance the federal budget, principally by cutting security spending. This means that within the compass of a single year a shift is occurring from a sharply increasing rate of federal purchases of goods and services (of which security is 90 per cent) to one of as yet moderate decline. The scale of this cut is difficult to calculate in calendar-year equivalents, all the more so because of the unknown rate at which past budget authorizations are to mature and because of unsettled fiscal plans for 1954-55.

According to the *Review of the Budget in 1954,* security spending in fiscal 1953-54 is expected to fall about 1.5 billion dollars. Given the unknowns, I suggest that we ought to expect an over-all cut of federal purchases of at least 2-3 billions in calendar 1954. Moreover, if current plans are realized, the cash deficit in 1953-54 would fall to 0.5 billion, as against 5.3 billions in 1952-53. On this basis, fiscal operations would about cease to contribute to money supply.

We have, then, two basic facts. Federal purchases are now slowly decreasing instead of sharply increasing, and the Administration is determined to try to maintain the present boom. What are the requirements for success and how good are the possibilities?

To keep the present boom going in 1954 would require, first, that we increase employment by about one million persons over the 1953 average (this figure is only an approximation, given the recent erratic behavior of the labor force); second, that average weekly hours remain about as present; and, third, that output per man rise about 2.5 per cent over 1953. On present estimates, an average of about 62 million persons produced 369 billion dollars of gross product in 1953, or

$5,952 per man. If productivity rises 2.5 per cent, then 63 million persons should produce about $6,100 per man, to turn out a gross product of about 384 billions at 1953 prices. Relative to 1953, product should rise about 15 billions, or 4 per cent in real terms. Add 2 to 3 billion dollars to cover the reduction of federal purchases and it follows that the other main forms of spending would have to rise by 17-18 billions to provide adequate effective demand for full employment output as defined.

Consider next these alternative forms of spending. Gross private domestic investment in 1953 was the same percentage of gross product as it was in 1952 and a little below 1951. We do not know, of course, whether the current rate is "high" or "low" relative to product over the long period. If we calculate the average annual rate of increase in investment since 1948, at constant prices, it would increase by 1.5 billion dollars in 1954 at 1953 prices. However, this projection conceals marked annual fluctuations. A somewhat more refined estimate can be made by going to the components of investment. Postwar, producers' expenditures on plant and equipment have run annually at about 11 per cent of gross product, with marked stability. If product were 384 billion dollars, this type of investment would be 42.2 billions. Business inventories are much more volatile. One method for obtaining a "normal" value for inventories is to relate their annual changes, in constant prices, to annual changes in gross product for certain normal years: 1941, 1947-48, and 1951-53. On this basis, inventories rose on the average about 315 millions for each 1 billion increase of product, at constant 1952 prices. With an increase of product of 15 billion dollars in 1954, inventories would rise about 5 billions. If, further, residential nonfarm construction, which unfortunately has a cycle of its own, were to hold at the 11.5 billion rate of 1953, then gross investment would rise about 2.2 billions in 1954. By comparison, the simple projection from 1948 yields a figure of 1.5 billion.

Turn next to personal consumption expenditures. The third-quarter rate for 1953 was about 231 billion dollars, or 62.6 per cent of estimated gross product. Compared to disposable personal income, consumption was 93.1 per cent and personal savings 6.9 per cent. As a percentage of disposable income, personal savings are slightly below 1951 and 1952 but a little above the other years from 1948. On the basis of the average annual rate of increase in consumption between 1948 and 1953, at constant prices, there would be an increase of 6.9 billions in 1954 at 1953 prices.

There remains state and local government expenditure on goods and services. In 1953 these purchases had an annual rate of 25.2 billion dollars in the third quarter, or 6.8 per cent of gross product. This

percentage lies close to those for all years from 1948. On the basis of the average annual rate of increase in this spending, at constant prices, between 1948 and 1953, the increase in 1954 would be about 1.4 billions at 1953 prices.

If—and it is a large "if"—recent tendencies in these three forms of spending were to continue in 1954, then as measured the increase would be between 9.8 and 10.5 billion dollars. This increase falls short of the desired 17-18 billions by between 7.5 and 8.2 billions.

However, there is an additional compensating factor to consider: the tax reductions already legislated for 1954.

I shall begin with those tax cuts that would primarily affect private investment. There are two. The federal excess profits tax expires at the end of 1953. On a 1952 basis, the Joint Committee on the Economic Report estimated a tax saving of 2.5 billion dollars. In addition there is a scheduled decline of 5 percentage points in the federal normal corporate income tax after March 31, 1954, which would cut the overall corporate income tax to 47 per cent, as against the present 52 per cent. On 1952 data, the Joint Committee estimated a tax saving here of 2.0 billions. Adjusting for its delayed impact in 1954, the saving would be 1.3 billion at 1952 levels of income.

The other tax reductions primarily affect personal consumption. Again there are two. At the end of 1953, the federal individual income tax will fall about 10 per cent. At 1952 values, the Committee calculated the saving at 3.0 billion dollars. Moreover, the emergency increases in certain federal excises will lapse after March 31, 1954. On a 1952 basis, the Committee estimated their value at 1.0 billion. Adjusted for delayed impact in 1954, the figure becomes 750 millions.

If these tax savings are fully spent in some way, their total value on the 1952 basis would be about 7.5 billion dollars. If the desired increase in gross product for 1954 were realized, their value might become perhaps 8.0 billions, given a higher level of income in 1954 relative to 1952. However, the federal old age security tax is scheduled to rise by one-third on January 1, 1954—an increase of at least 1.0 billion dollars. There is some reason to expect that this increase will be postponed by the new Congress, but against this there is the further possibility that the reductions in the corporate income tax and in the federal excises will also be deferred. In view of these imponderables, it seems safest to put the value of the tax cuts at about 7.0 billion dollars.

Putting together the 7.0 billions for tax savings and the 9.8-10.5 billions projected "normal" increase in investment, consumption, and state and local government spending, we obtain a total "compensating" figure of 16.8-17.5 billions, to set off against the required increase of 17-18 billions in these spending components if full employment as

defined is to be maintained. The margin is obviously close, so close that even renewed price-wage inflation ought not to be eliminated as a possibility. However, any estimates of the kind presented here should not be taken too literally. There are some major unknowns. We do not know the extent to which private investment in recent years may have been induced by rapidly increasing federal purchases, as against the possibility that the rise in government purchases may have displaced some private investment. Private investment is a notoriously unstable type of spending in any case. Nor do we know to what extent the tax savings will be offset by further increases in investment and consumption. Finally, we do not know, given budgetary uncertainties, what the actual cuts in federal purchases will actually work out to be in 1954. Accordingly, I find myself in Lord Melbourne's state of mind.

I turn now to a brief review of some favorable and some unfavorable factors to be considered in assessing the outlook for 1954. Among the favorable ones are the long-term growth requirements of our economy. Admittedly, requirements or needs are by no means the same thing as effective demand for investment goods. Nonetheless, these requirements offer rather convincing evidence that our economy is well short of having been fully built up, if such a concept has any meaning. Instead they suggest that there are large and continuing outlets for investment, if a bearish hoarding psychology can be avoided.

One such outlet is residential construction, stimulated by the rise in rates of population growth and of family formation and in number of children per family after 1940. Another outlet is public and private construction of highways, hospitals, schools, and other civic facilities, pushed by urban growth and decentralization in recent years. Last there is the upward secular trend of private investment since 1889, which suggests a long-run connection between investment and gross product. It is true that the trend was broken between 1930 and 1946. Undoubtedly, one's interpretation of that break will influence the degree of faith he will assign to the trend as such. Since I am not convinced that the growth potential of the enterprise system is coming to an early end, I am inclined to give the trend a good deal of weight. Neglecting the real possibility of adverse short-period movements, I would expect private investment to be a strong upward force for the next several years, fortified as it now is by heavy expenditures upon industrial research.

A second favorable factor is the more immediate one involving the return to an easy money policy in the spring of 1953. Between May and September, the Federal Reserve resumed open market purchases of government bonds, bringing these holdings to an all-time high and

helping to lower the rate of interest slightly. Also, early in July, member bank reserve requirements were reduced about 1.1 billion dollars. In consequence of these moves, excess reserves of the member banks rose from a low of 102 million in June to 634 million in October. The October level compares well with October values for 1951 and 1952.

The attempt of the new Administration at the beginning of the year to cut down the rate of increase in money supply—wrongly labeled as a "hard money" or deflationary policy—was probably unfortunately timed, or at least it was pushed a little too rapidly. However, the error is forgivable in the light of past errors since the Korean war began, and there is much merit to the conversion of the heavy short-term government debt to long-term issues, so long as it can be done without marked deflationary effects. In any case, the recent relaxing of monetary policy is a permissive rather than positive influence upon effective demand. It means an easing of capital markets and of commercial and consumer credit, which encourages borrowing for private investment, for consumption, and for state and local expenditures.

I turn now to the unfavorable factors that are usually cited. I would place foremost the instability of private investment, as recorded in past time. I do not believe we have abolished fluctuations in investment. As Spiethoff, Schumpeter, and Hansen have shown, temporary saturations are possible, whether from pro tem exhaustion of the reserve of potential innovations or from catching up with important categories of consumer demand. If a bad conjuncture should occur in which phenomena of this transient kind were linked to a declining rate of security spending, the result would be a sharp fall of private investment, with the familiar deflationary repercussions upon income. We should allow for the possibility, and be prepared to resort to strong discretionary actions if it happens. However, if we wish to avoid large errors in policy, we should not confuse events of this kind with the much more conjectural case of chronic investment deficiency, which is predicated upon some version of secular stagnation.

A second, potentially unfavorable, influence is the possibility of sudden large cuts in outlays for security. For the long run, a sharp reduction of defense spending would be anything but an economic disaster. However, its impact would have adverse shock-effects. In recent public statements, Secretary Wilson has shown awareness of this, emphasizing the slow rate of projected decline. Nonetheless, surprises are possible. Advances in the technology of defense, particularly in weapons, might lead to considerable labor and capital saving, with effects showing up in the next fiscal year. Moreover, there is always the possibility, nebulous as it now is, of a genuine world settlement,

which could make for a reduction of at least 10 billion dollars in short order. I have no hope of such a settlement, but it is an erratic element to be kept in mind.

Some concern has been expressed concerning inventories and consumer debt. In the third quarter of 1953, inventories were increasing at an annual rate of 4.5 billion dollars, as against 8.8 billions in the second. The latter figure gave evidence of real trouble. However, the third-quarter rate does not appear out of line if the increase in real gross product in 1953 over 1952 actually were to occur.

As of September, 1953, outstanding short- and intermediate-term consumer debt stood at 27.9 billion dollars. This was 9.8 per cent of estimated disposable personal income in 1953, which compares with 10.3 per cent in 1939. At the current level of income, the volume of consumer debt does not seem excessive. However, the annual rate of increase in 1953 (to September) was 4.4 billions, as against a yearly average increase of 2.9 billions for 1945-52. If the high 1953 rate of increase were to slacken, this alone would have a small deflationary effect. If income were actually to fall in 1954, the overhang of this debt would have larger deflationary impacts.

Among the remaining unfavorable elements, there is the possibility that the automobile and home equipment markets may be facing temporary saturation. If so, it could affect investment in these important fields, though the over-all impact would depend upon whether consumption and investment were shifted to other directions rather than diverted to hoarding and consequent falling income and output. There is also the possibility that the present federal economy wave might spread to state and local government, possibly cutting down expenditures at these levels at a time when their increase is desirable.

In making an appraisal of the economic prospects for 1954, I wish to avoid an explicit chronological prediction. As I have estimated it, the balance between prospective effective demand and the value of full employment output is almost exact, if everything worked out perfectly. However, there are at least three principal uncertainties which could make any prediction look exceedingly foolish: the behavior of private investment, the impact of foreign affairs upon defense requirements, and plans for fiscal 1954-55. My chief conclusion is that the possibility of some deflation is now stronger than at any time since the end of 1948, but that we should not be too suprised if instead there were a renewal of inflationary pressure. What is required is that the discretionary elements of fiscal and monetary policies should be mutually consistent, flexible, and reversible, so that any pronounced swings can be offset as promptly as possible. For this purpose, these policies should be guided by clear-cut rules. I shall return to this point subsequently.

If deflation should develop, what role would the automatic stabilizers play? These stabilizers involve those taxes and transfers, at all levels of government, which are "income-sensitive." When national income declines, the intake of these taxes falls, while the outgo of these transfers rises. The deficits so generated function as an offset to saving and as a means for checking a shrinkage in the supply of money. The table below indicates the values for the stabilizers, expressed as percentages of any given change in the national income. The federal taxes in the group were calculated at their expected 1954 rates.

ESTIMATED VALUES OF THE AUTOMATIC STABILIZERS EXPRESSED AS PERCENTAGES OF CHANGE IN NATIONAL INCOME

| Stabilizer | Per Cent of Change in National Income |
|---|---|
| Federal corporate income tax | 10 |
| Federal individual income tax | 13–15 |
| State and local income taxes | 1 |
| Federal, state, and local sales and gross receipts taxes | 2– 3 |
| Social security contributions | 2– 3 |
| Unemployment compensation | 8–12 |
| Agricultural support price payments, veterans' benefits, public assistance | 5–10 |

As calculated, the stabilizers run between 40 and 50 per cent of a change of national income, in either direction. This means that if deflation were to lower national income by, say, 10 billion dollars and if public expenditures other than transfers were not cut while the transfers here were to rise as estimated, then deficits would be generated of 4-5 billions. These deficits would serve as a new offset to saving, which would compensate for a fall of 4-5 billions in private investment and yet check the fall of national income at 10 billions instead of considerably more. Furthermore, if the deficit were financed through the banking system, it would help offset a decline of money supply and in fact might actually increase the public's stock of cash. This would help against hoarding tendencies and might possibly help turn consumption and investment upwards again. However, the main effect of the stabilizers is to reduce the scale of fluctuations in income and output and not to eliminate them entirely. They afford no guarentee against a deep depression if investment should fall drastically.

So much for the economic prospects in 1954. Deflation is a possibility. What approach should be taken if it becomes a fact? Admittedly the answer rests upon one's judgments of value concerning the norms for fiscal-monetary action. I offer mine with full awareness that reasonable differences of opinion can exist concerning them.

There is probably little disagreement over the principle that it is the task of fiscal and monetary policies to stabilize as far as possible the rate of economic growth over the long-run rather than some given level of income and employment as such. This means that we should not

lose sight of our primary common interest in a permanently expanding economy merely to cope with short-term fluctuations. What is required for the task is a simple and defensible rule that can serve as a permanent guide to discretionary policy. The rule most likely to unite the popular desire for stability (minimizing swings of deflation and inflation) with the far less obvious popular interest in permanent growth is this: to strive for the lowest rate of unemployment consistent with a reasonably stable wholesale price level over the long run. There is good ground for believing that the rule would mean 3-5 per cent unemployment of the civilian labor force as a permanent norm for policy. If full employment were so defined, there would probably not be any significant problem of price-wage inflation. The rule would call for secular increase of money supply in an expanding economy, but the long-run rate of increase would not pull up effective demand too rapidly.

For the rule to be consistent with permanent growth, economic policy as a whole ought to foster the flexibility and competitiveness of the economy in place of forestalling adjustments indicated by the market. To me, this means avoidance of direct price-wage controls, excess profits taxes, and price-rigging schemes in general, of which agriculture and the tariff are the most notorious examples. What we require for permanent economic growth is security of competitive opportunities rather than the fixed security of established status. If our policies promote growth combined with reasonable stability, the economy will yield a generally expanding environment of opportunities sufficient to ward off pressures for uneconomic control schemes and to relax those now in being. Further, if at times deflation calls for monetary expansion, this can be done without creation or perpetuation of broad privileged groups as the recipients of large-scale transfer payments, where the only justification for the payments is an alleged need "to support the economy." The formation of such privileges tends to corrupt both the beneficiaries and the government donors while increasing inequalities of income and of economic power.

Finally, there is great merit to the principle that the economy should depend as much as possible upon private spending, because such spending is a major means by which personal freedom is exercised in the economic order and because of its close connection with economic efficiency. By contrast, government spending is inherently coercive and rests upon a transfer of economic power from the people to political authorities. Most of us would admit that some government spending is desirable for the promotion of certain common national and international purposes. Disagreement usually centers on the range and scale of these purposes, and here unfortunately there is no strong principle for fixing limits. The proposal to place as much emphasis as possible

upon private spending means that proposed increases in government expenditures ought to rest upon a broad basis of public consent and ought to be justifiable on grounds other than sheer pump-priming.

The basic problem for fiscal-monetary policies is not, in my opinion, that of automaticity versus discretion or of rules versus authorities. Rather, it is a question of rules for authorities. Discretionary action there must be, to cope with at least two main kinds of uncertainties: swings in private investment and erratic changes in foreign affairs that react upon expenditure for national security. If we wish to preserve a tolerably free political and economic order, we shall require authorities who can undertake discretionary actions. However, those actions should be bounded by principles which are most likely to maintain an expanding economy and a free political and economic order. The approach outlined here is necessarily terse and imperfect, but it does take account of what seem to me the essentials.

The specter of deep deflation has been haunting economic thinking ever since 1945, so much so that even the mild recession of 1949 was viewed in some quarters as the beginning of a catastrophe. Undoubtedly the fear of deflation has been strongly influenced by the Great Depression, especially by the theory that this depression had its origins in a permanent decline of opportunities for private investment. On acceptance of this theory, it follows that ever increasing federal spending is essential to full employment and sustained expansion. By contrast, a cut in this spending then becomes the sure road to ruin. No doubt, too, the plea for ever increasing federal spending also rests upon a preference for state over private action. Otherwise the route of tax remissions becomes as good a means to the permanent deficits believed necessary to offset the chronic "excess" savings presupposed by the theory.

Fiscal and monetary thinking today must come to grips with the theory itself and with its applicability to the thirties. The theory appeals to certain strategic influences: population growth, filling up of the technological frontier, and so on. Admittedly, these influences could slowly turn adverse over the long-distant future, and we ought to acknowledge the possibility and to take account of it in designing the framework for fiscal and monetary policy. In my view this is perfectly possible. If eventually we find ourselves drifting into stagnation, we could go over to permanent deficits, created mainly by tax reductions and supplemented by increased federal expenditure having independent justification. However, it would be a dangerous mistake today to interpret the first sign of real deflation as proof that stagnation is upon us.

Moreover, the theory yields a very awkward fit as an explanation of fluctuation in the thirties. The strategic forces upon which the theory

rests no longer carry the conviction they once did as an explanation of past events. A much less heroic explanation is possible, along lines forcefully developed by Schumpeter. On the "real" side, there was a temporary saturation of investment opportunities at the beginning of the thirties. On the monetary side, there was a rapid destruction of money supply, occasioned by an incredibly bad banking system that is still in need of reform and by a disastrous series of international monetary crises. Brutal liquidation and almost insatiable hoarding were the result. Persistently vigorous counterattacks with the usual monetary weapons were foreclosed by difficulties with the gold reserve. Deep decline followed until mid-1932—a decline intensified by monetary weakness and attendant extreme pessimism. As for the weak recovery of the post-1933 period, there is much strength in Schumpeter's view that its root causes lay in a "hangover" of pessimism from past shocks and the rise of an accompanying strongly anticapitalist mentality having tangible expression in the tax and regulatory fields. Capitalism depends upon the creative efforts of the active business strata, but these were demoralized throughout the decade.

From this general view, it follows that we should not confuse fluctuations of private investment with a chronic deficiency of investment opportunities. Fluctuations are normal and will continue to occur. To some extent their swings will be checked by the automatic stabilizers, while their course can be reversed by appropriate discretionary actions in the fiscal and monetary spheres. Permanent vanishment of investment opportunities is quite another thing, as yet only hypothetical and calling for much more drastic discretionary measures, partly of a different kind.

With this distinction in mind, let us assume that deflation will start in 1954. In the light of the preceding argument, what can be done about it? To a considerable extent the answer will depend upon the severity of the decline, both as to speed and to depth. I shall consider two strong cases.

In the first, gross product falls short of the required increase as defined earlier, or perhaps simply fails to rise at all, which latter was the case in 1949. In this case, the unemployment rate would rise at most to 6 per cent of the labor force, depending upon what happens to the level of product within the limits indicated and upon the relative importance of layoffs and short-time. No great change in prices would be likely. In this instance, the mere slowing down or cessation of growth without an absolute fall of output would carry some deflationary effects.

In the second case, real gross product declines absolutely and at a rapid pace, which if unchecked might approach the 9.6 per cent drop between 1929 and 1930. Unemployment might ris[illegible] per cent

of the labor force within a single year. A slump of this magnitude would be extreme but could occur with a very unfavorable conjuncture involving falling private investment and slowly declining federal purchases together, or from possibly adverse reactions induced by a sharp cut of, say, 10 billion dollars in defense spending. Some fall in prices could also be expected.

For the first case, the current monetary and fiscal policies described earlier—easy money plus already legislated tax reductions—seem to me sufficient to halt the decline at close to 5 per cent unemployment. If affairs continued to drift at this level into 1955 instead of turning upwards again, moderate resumption of open market purchasing would be in order. If things turned downward in serious degree, then the program sketched below for the more serious case ought to come into action.

For this second case, considerably stronger measures would be required, even recognizing the potential braking action of the stablizers. Its onset would be signaled when unemployment attained the 5 per cent rate within six months' time. At this point, open market operations should be started and consistently pursued. If nonetheless the unemployment rate were to exceed 7 per cent for one quarter, discretionary action on the fiscal side should be taken. For such purpose I would propose, first, upward revision in rates of unemployment compensation, additional reduction at the lower brackets of the individual income tax, and revisions in taxes upon business income. Among these latter revisions I would suggest more liberal write-offs for depreciation and more generous allowances for surplus accumulations. Then, as a second line of defense, I would propose broad resort to defensible public works projects. Together, these measures seem to me sufficient to turn the tide.

Under either case, both of which are still purely hypothetical, there are practical steps that ought to be taken now, so that we may be properly prepared. The scheduled rise in the old age taxes ought to be postponed. The scheduled cuts in the corporate income tax and in federal excises ought to go through. Legislation ought to be developed to give the President some discretionary power over the rates of individual income tax, perhaps subject to legislative veto. A reserve of useful public works projects should be built up, to be ready for use if needed. Emphasis should be shifted at this time from the objective of a balanced federal budget in the near future to the objective of stabilizing growth. High-level balance is both desirable and possible for the long term, but it ought not to be pursued so vigorously now when readjustment to falling defense expenditures is under way.

Along with these measures, long-range legislative studies are required to lay the basis for some important reforms in our tax and monetary

systems. The present federal tax laws discriminate too harshly against new and growing enterprises, though such firms are essential to expansion and vigorous competition. Our monetary system still suffers from perverse elasticity, while discretionary policies affecting the supply of money depend upon diverse authorities that can act from inconsistent objectives. We require a tax system that fosters incentives for private investment, while our monetary system should be better adapted to the task of more effective control of fluctuations. Reforms in both spheres could contribute much to the twin objectives of growth and stability.

The general approach sketched in this paper rests heavily upon three basic assumptions. First, the principal concern of fiscal and monetary policies should be the control of interim economic fluctuations in a manner consistent with long-run growth and flexibility. Second, growth rests primarily upon a continuing high rate of private saving and investment. Third, there remains a great potential for growth under the system of private enterprise.

In keeping with these assumptions, I have placed much stress upon the creation of incentives for private spending. Private investment is the most important category of this spending, not only because it is much more volatile than consumption, but because it is vital to long-term growth and increased economic efficiency. On this view, fiscal and monetary measures designed to cope with deflation should stress the promotion of private investment. Support of consumption alone is not sufficient either for stability or progress, and if the methods for supporting consumption work against saving and investment, full employment will be much more difficult to maintain while long-term economic progress will be slowed down.

Economic progress is the primary material interest of the whole population. It is particularly vital to the younger generation, which has the most at stake in an environment of increasing opportunities. It surely ought to be possible to provide that environment and all of its attendant material benefits if, in our fiscal and monetary thinking, we are wise enough to avoid the complacent optimism of the twenties and the bleak despair of the thirties.

# FULL USE OR UNDERUTILIZATION: APPRAISAL OF LONG-RUN FACTORS OTHER THAN DEFENSE

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This paper is concerned with the question whether in the United States the "present period," in the sense of, say, the third quarter of the twentieth century, does or does not truly tend to be a period of high economic performance. Are we living in genuine prosperity, the fruits of which we are forced partly to sacrifice in the interest of national security, or are we living in a period of stagnation which is merely covered up by the international tension and by the consequent military and foreign aid expenditures?

It is true, of course, that our military and foreign aid expenditures are mainly tax-financed and that a hypothetical American economy with much lower government spending would also be an economy with a much lower tax burden. But this, in itself, does not answer the question. Tax reductions would but partly become expressed in increased consumption; in part they would be reflected in additional savings. The question of whether a tendency toward genuine prosperity could be expected without high military expenditures or other government spending of equivalent size calls for a discussion of the time rate of investment in a progressive economy.

While, in passing, I will try to answer my central question directly, my direct answer does not claim to be of much interest. If I wanted to avoid mere guesses, I would naturally have to say that I do not know. But I think that it may be possible to make suggestions concerning the nature of some of the main circumstances which must be weighed by persons who wish to make their own guesses. Suggestions relating to the nature of essential factors involved in such a problem are much less subjective—and, I hope, less irresponsible—than are suggestions as to correct ultimate answers. Even my discussion of the essential factors that must be weighed against each other will, of course, be admittedly incomplete.

## I

I shall attempt to justify the following three propositions:

1. A private enterprise system can function satisfactorily only if the character of technological and organizational improvements in it

adjusts to the requirements of the system, in the framework of a response mechanism. If, for a moment, we disregard the controversial problem of the thirties, it is reasonable to assume that capitalist development was largely shaped by such a response mechanism. It is equally reasonable to assume that, in a peaceful period, the future of these systems would depend mainly on whether such a response mechanism of induced improvements continues to function efficiently.

2. There exist, of course, many environmental factors which distinguish the present period from the nineteenth century and the early part of the twentieth. A system of responses that performed satisfactorily in the past may not so perform in the future. However, environmental factors were changing throughout the nineteenth century, without serious damage to the improvement-mechanism which kept the system going. This should direct our attention mainly to environmental changes of which it can be maintained with some degree of plausibility that the cumulated change up to now exerts an appreciably greater influence than did the cumulated change up to the early part of the century. I believe that two changes must be admitted as possible candidates for this role. There has occurred a decline in the rate at which Western capitalist countries are acquiring new resources such as co-operate with capital; and there has taken place a significant increase in the economic security-mindedness and equality-mindedness of Western communities. The first of these changes gives rise to a type of pessimism which may be associated with the names of Keynes and Hansen. This pessimism is ultimately based on the idea that, with a smaller increase in co-operating factor supplies, improvements will not in themselves overcome the accelerated tendency toward diminishing returns for capital. The second change gives rise to the Schumpeterian pessimism, which maintains that capitalism has created a social-political climate in which it will be unable to thrive. I shall suggest that reasoned pessimism concerning the ability of the system to function properly aside from military expenditures would have to be Keynes-Hansen pessimism or Schumpeterian pessimism in these broad senses of the terms.

3. Finally, I shall suggest that those who, for the United States, share neither of these two basic types of pessimism should, nevertheless, recognize that the mobility of resources has become reduced by some comparatively recent social and economic forces, although it probably has become increased by others. Also, we should expect a changed cyclical path around the general trend-line.

It is necessary to add that I shall include here the effect of monopolistic rigidities partly under the heading of security-equality-mindedness and partly under that of immobility. By monopolistic rigidities,

I mean rigidities stemming from producers' monopoly as well as from unionism.

## II

My first proposition relates to the induced character of technological and organizational improvements in a properly functioning private enterprise system. The past record of economic growth in Europe and in North America is one of offset tendencies toward sharply diminishing returns to capital. The stock of capital has been increasing in much higher proportion than the labor supply. Furthermore, on a static level the available stock of natural resources would have remained fixed, because any acquisition of new natural resources takes place in the framework of technological or organizational innovation (or of discovery). Against such a background of potentially sharply diminishing returns to capital, there has occurred new capital investment at a significantly rising time rate. The system could not have functioned if new additions to the capital stock had not shown a significantly rising trend, because the absolute amount of savings rises with the national income and hence new investment must also. This rising amount of new investment has not, in fact, produced any significant or even consistent diminution of returns to capital. It is true, of course, that any precise numerical statement on long-run trends in returns from investment contains quite a bit of spurious accuracy. For example, it is impossible to make the allowances for changes in the risk factor by statistically acceptable methods. But available time series on rates of return do not suggest a significant or consistent downward trend for any approximation to the concept of pure rates. In the absence of technological and organizational progress, there should have occurred a sweeping decline in the rate of return on new investment, because this activity has resulted in a much more rapid rise of the capital stock than of the available supply of co-operating factors. Technological and organizational improvements have offset a tendency toward sharply diminishing returns to capital.

To perform with this result, the improvement-mechanism of the industrially advanced countries had to satisfy certain conditions. It is sometimes overlooked that not just any "progress," or any sufficiently cost-reducing improvement, will do. The required improvements had to raise the productivity schedule of capital, not just that of some factor of production, by a sufficient margin. New capital investment has not been gradually losing its profitability, and this, in the given circumtances, has required that the improvements of successive longer periods (say, of successive decades) should raise the productivity schedule of capital by increasing absolute margins. For, as was said before, the

absolute rate of new capital formation had to show a rising time trend to match the increase of the amount of savings in growing economies—in economies in which the supply of capital has been rising much more rapidly than that of the co-operating factors.

The fact that the innovations had to raise the capital productivity schedules by successively increasing absolute margins does not in itself imply that they have raised the labor productivity schedules by relatively smaller margins. But, in fact, they have. The hypothesis that they have was, I believe, first expressed by Professor Hicks in his *Theory of Wages*. If improvements had raised the labor productivity schedules by approximately the same margin as the capital productivity schedules, we should have been able to observe a sweeping trend toward an increase of the relative share of labor in the national income. This increase would have resulted from a substantial increase in the capital stock per unit of available labor, and from a gradual decrease in elasticities of substitution. However, no sweeping trend of this sort is observable in relative income shares. Improvements per se must have raised the capital productivity schedules considerably more than the labor productivity schedules. The labor productivity schedules and the absolute share of labor have, of course, risen significantly because there corresponds a higher labor productivity schedule to a higher capital stock. It is perhaps impossible to tell whether improvements per se have raised or lowered the labor productivity schedules as compared to the position of these schedules which would have corresponded to an increased capital stock with no change in the state of the arts. But if improvements per se have raised the labor productivity schedules beyond this position, they must have raised these schedules by a considerably smaller margin than that by which they have raised the capital productivity schedules. For the effect on distributive shares of the relative labor scarcity (that is, of the more rapid increase in the capital supply) was offset by improvements. In accordance with relative factor scarcities, improvements have been primarily laborsaving rather than capitalsaving without becoming so greatly laborsaving as to create a chronic overabundance of labor.

In the presentation of this proposition, I have been using the concepts of the productivity theories of distribution, but the proposition does not necessarily require the analytical framework of these theories. It requires merely the acceptance of the statement that if the supply of one factor rises much more rapidly than that of the others, then, on a given level of the arts, returns to the more rapidly rising factor would have to be consistently declining. Approximate stability in relative shares must be the consequence of changes in the state of arts such as have tended to offset the relative scarcity of the factors co-

operating with capital, and yet have not turned the relative scarcity of these factors into a relative overabundance in any reasonable sense of this term.

It is difficult to imagine that a series of coincidences should have led to such results. Improvements that are forthcoming regularly on a large scale are likely to be consciously directed to reasonable objectives of a period. They are likely to bring onto the market products which satisfy a demand that has been increasingly felt in an economy, and they are likely to make use of additional quantities in those factors which are relatively freely available in additional quantities. In an economy where the capital supply rises much more rapidly than the supply of labor, the typical firm will consider an improvement more useful if it mainly raises the productivity of additional capital inputs with a given quantity of co-operating labor than if it mainly raises the productivity of additional labor inputs with a given quantity of co-operating capital. This is the sense in which the improvements of the Western world have tended to be relatively laborsaving (and raw-material saving), thus offsetting the relative labor scarcity (and raw-material scarcity) which would otherwise have established a sharply and consistently rising trend in the relative share of labor (and of rents). At the same time, the laborsaving character of improvements has not usually shot beyond the mark to such an extent as to bring about a fall in the relative share of labor or, alternatively, appreciable chronic unemployment. So far the literature has neglected the question of how a mechanism leading to such results may have come into existence. The mechanism requires either enough monopsony power to make individual producers aware of the existing relative factor scarcities, or the elimination through competitive processes of the wrong kind of improvement and survival of the right kind. The wrong kind is an improvement which is insufficiently laborsaving and therefore fails to maintain the yield of capital, or it is an improvement which is so strongly laborsaving as to prevent the producer's demand price for labor from keeping pace with the rising wage rate in the market. In the real world, the market wage rate has been rising under the influence of the "right kind" of improvement, which has been sufficiently laborsaving to maintain (by and large) the yield of capital but not so laborsaving as to prevent the productivity of labor from rising significantly.

This tendency toward the quantitative sufficiency of improvements and toward the adequacy of their qualitative properties has, of course, worked out satisfactorily only in the long run. The story of single years, and even of some decades, as a whole, is very much less harmonious. I do not mean to suggest that the disharmonies of the short run are of minor significance in view of the harmonies expressing themselves in

secular trends. No one should minimize the significance of frequently recurring years and possibly of recurring decades in the life history of the typical individual. Indeed, I feel convinced that the present social system of the Western world would be unable to survive some of the disturbances which have occurred in the past. Yet I shall argue later that in the future some of the short-run disturbances are likely to be better under control, provided that the improvement-mechanism —that is, the response-mechanism of induced improvements—will live up to its past long-run performance.

I have deliberately avoided the question of whether the thirties should be interpreted as a period of protracted depression or as the beginning of an era in which the long-run performance of the system has become unsatisfactory. To this question I need pay no separate attention, because it is essentially identical with the question of whether at present we live in a period of genuine prosperity or in a period with stagnant characteristics which are merely covered up by military expenditures.

## III

Much of the Keynes-Hansen type of pessimism concerning the future functioning of the economic system may be translated into our terminology by stating that the improvement-mechanism is likely to be insufficient for overcoming the sharper tendency toward diminishing returns which will result from a reduced rate of increase in the supply of labor and of natural resources. Since it is appropriate to view additions to the stock of natural resources as always forthcoming in the framework of a process of organizational or technological innovation or discovery, we may in stricter logic interpret this type of pessimism as maintaining that the main period of a very special variety of innovation—that of Western territorial expansion into noncapitalistic areas—is over, and that therefore improvements in the more usual sense of the word would have to carry a correspondingly enlarged burden. The burden on the improvement-mechanism is further increased by smaller rates of population growth. Insufficiency of additions to the labor supply increases the tendency toward diminishing returns to capital, and if this sharper tendency is not offset by correspondingly more potent improvements, returns may become too low for establishing a time-path of new investment which would match the time-path of new savings in a continuously growing economy. Starting from a postulated high initial level of activity, the economy would have to contract to a level where both the equipment and the labor force are underutilized and where, after the gradual elimination of the excessive capital, savings are no

greater than the forthcoming new capital formation. Thus chronic unemployment of labor, accompanied at first by underutilization of capital, may be the indirect consequence of the insufficiency of the labor supply. This is quite compatible with the equally valid proposition that chronic unemployment may result from excessive labor supply such as may promote continuous full use of the available capital equipment but not of labor itself.

I do not believe it necessary to consider here in detail the controversial question of whether in the Keynes-Hansen universe an adjustment of wage rates would tend to eliminate the unemployment. I think that the Keynesian negative argument in this regard is inconclusive. It may be possible to argue that the Keynes-Hansen pessimism, which leads to anticipating the chronic necessity of deficit-financed public investment, is merely a variant of the institutional pessimism that stresses price and wage rigidities. But this way of looking at the Keynes-Hansen pessimism has, at any rate, the disadvantage of implicitly requiring from the system that it should posses a degree of flexibility which even potentially it may never have possessed. Uncompensated, sharply and continuously diminishing returns would create conditions under which we have never observed a capitalist system function. Let us then take it for granted that under such circumstances we would be facing difficulties which would have to be overcome by highly unorthodox methods.

The Keynes-Hansen pessimism, as it is interpreted for the present paper, does not rest on a logical fallacy, but its foundations include subjective judgments which I do not happen to share. I shall briefly indicate three reasons for dissenting.

1. There exists the presumption that if declining population growth had placed serious obstacles in the way of new capital formation, we should have noticed these difficulties much earlier than in the thirties. We should remember that what matters here is not declining absolute additions to the population but a declining proportionate (percentage) increase, or, more precisely, the diminution of the proportionate population growth relative to the proportionate growth of the capital stock which is required for absorbing savings. Relative diminution of population growth in this sense was characteristic all over the Western world of many decades during which the stagnation problem possessed no practical relevance.

2. I find it difficult to imagine that the period of high military expenditures should come to an end without the emergence of conditions under which the economically less advanced nations of the world become more closely integrated with the most advanced ones. The

consequences of such integration are similar in some respects to those of territorial expansion. This remains true within a wide range of possible distributions of the gains from integration.

3. Last but not least, while a slower increase in the supply of factors co-operating with capital would require more improvements per unit of new capital investment (to overcome the accentuated tendency toward diminishing returns to capital), the total amount of required new capital formation per period would presumably be smaller. This is because with a smaller quantity of co-operating factors total output would be smaller in each period and total savings, too, would be smaller than would be the case in the event of a larger quantity of co-operating factors. Therefore, it is not at all obvious that more improvements would be needed per period of time to keep the economy going with a smaller rate of increase in co-operating factors. There exists no good reason to expect that savings will account for an increasing proportion of output, and there certainly exists no reason to believe that a smaller increase in the supply of factors co-operating with capital would produce an increase in the saved proportion of incomes. Hence the absolute amount of new savings and of needed new investment would be smaller in each period if the increase in the supply of co-operating factors were to be smaller. Each unit of this new investment would require more improvement—a greater upward shift of the capital productivity schedule—but fewer units of new investment would be required. It is not possible to make the simple statement that in such circumstances the improvement-mechanism would necessarily be put to a greater strain.

These are my main reasons for feeling unconvinced by the Keynes-Hansen pessimism.

## IV

The Schumpeterian pessimism raises problems of such enormous complexity that there seems to exist no workable middle way between discussion that is of the most superficial kind and discussion that would require a whole paper. I shall limit myself to a few brief comments.

The security and equality constraints under which the profit motive is permitted to operate have considerably increased. Much of this results from the greater political influence of persons belonging in the relatively low-income groups and of their representatives. The increased political influence of these strata is in turn mainly a consequence of urbanization or, more specifically, of the regional concentration of large masses of persons who receive enough schooling to become politically articulate. There exists no indication that the power of organized labor groups would have resulted in a rise in the relative income share of

labor, before taxes. But much of the political pressure toward highly graduated taxation has originated in organized groups of workers. The pressure toward social security is also connected with the organization of labor. At the same time, security-mindedness has probably increased also among groups of employers. In principle, this could very well stem from a growth of the monopolistic admixture to our systems of limited competition between firms, but I see no indication that the monopolistic admixture has grown recently. Security-mindedness among employers may result from many other circumstances; for example, from an increased influence of hired managers. Alternatively, it may simply be a reaction to the reduced influence of entrepreneurial groups as compared to labor leaders and government officials and to the new policies of the period.

It is, of course, obvious that an overdose of equalitarian tax policies and of security-mindedness is incompatible with the proper functioning of the response mechanisms on which a private enterprise system rests. At the same time, some admixture of these ingredients may improve the performance of the economy. In the political discussion, some place great emphasis on the antideflationary effect and thus on the possible trend-improving effect of a higher propensity to consume. Others tell us that such effects are outweighed by the adverse impact of equalitarian policies on the margin of earnings. The political discussion moves in terms of half-truths.

My own impression is that in some countries of the Western world equalitarian constraints and rigidities of various sorts have grown to such an extent that they are very likely to interfere with long-run productivity trends. To me, the United States does not seem to be one of these countries. Also, the American attitude to this problem appears to be more experimental, less inflexible, than that of some other nations. With very few exceptions, no person whose word counts wants to expose the American private enterprise system to a real risk, because no one in his right mind can visualize himself, or a group to which he belongs, as administering a different sort of system to the reasonable satisfaction of an appreciable proportion of the population. In not all European countries is this true. Nor would it be likely to stay true of the United States if we should run into a severe and extended depression.

## V

I shall now briefly summarize the main part of my paper and I shall add two comments to my summary.

It seems to me that economic development in the industrial nations has been shaped very largely by two circumstances. One of these is that technologically and organizationally we live in improve-as-you-go sys-

tems; that is to say, we produce output with an eye on improving our methods. Hence, we produce output and improvements jointly. The other, equally important, circumstance is that the character of our improvements has tended to adjust to the requirements of the system, particularly to relative resource scarcities. Whether we feel optimistic with respect to the ability of the improvement-mechanism to assure a satisfactory long-run performance in the future should, I think, be made dependent primarily on our appraisal of the Keynes-Hansen pessimism and on that of the Schumpeterian pessimism. I do not happen to share the Keynes-Hansen pessimism in general, and I do not happen to share the Schumpeterian pessimism for the United States. But I believe that logically the issues raised by these authors should be regarded as open issues.

Even those who expect satisfactory future long-run performance for the reasons which assured such performance in the past, should, I think, anticipate important differences between past and future developments in some respects.

Producers and workers in "relatively overproducing" industries have acquired more power to obtain subsidies and to prevent resources from flowing into other sectors of the economy. This is an important difference which reduces the allocational efficiency of the system and which may also exert an unfavorable influence on trends in over-all productivity. It is true that, on the other hand, better transportation and schooling have tended to increase the mobility of resources. The mobility problems of the present and of the future possess characteristics which the mobility problem of the past did not possess in a comparable degree.

Secondly, contemporary governments are much freer to counteract deflationary influences than were those of the past, but they will find it more difficult to suppress inflationary developments. The freedom to compensate deflationary tendencies was, of course, acquired at a considerable cost. Whatever arrangements may succeed the gold standard in the long run, the international monetary apparatus of the future will make it less difficult for individual nations to pursue objectives of their own at the expense of others. Also, the greater ability of governments to counteract deflation is partly a consequence of the increased size of budgets—of the increased cost of government—even aside from military expenditures.

Yet I believe that greater power to avoid severe deflation, combined with an increased risk of inflationary deviations may, on balance, bring an appreciable gain. Indeed, I believe that the change will bring an appreciable net gain in countries where the antideflationary policies do not become exaggerated to the point of dogmatism. A dogmatic anti-

deflationary line which attempted to exclude even moderate fluctuations in employment would have to be supplemented by comprehensive direct controls. Under such circumstances, the efficiency of the system would become seriously impaired, and fundamental changes in political as well as economic institutions would be likely to occur. The objective of avoiding comprehensive direct controls for suppressing inflation sets limits to the possibilities which are open to antideflationary policy. But the hope seems reasonable to me that in the United States these limits will be observed and that within these limits the monetary and fiscal policy of the nation will make use of its greater freedom of action to counteract periodic deflation tendencies of significant size. By the proper balancing of these various objectives, we may place ourselves on a much more satisfactory cyclical path than that on which we had been moving up to the second World War.

## DISCUSSION

Clarence E. Philbrook: With respect to the long period, both Professor Fellner's and Professor Hildebrand's appraisals have lent confidence—I will not say fully justified—to my own intuition that we need not be swept away by the Keynes-Hansen pessimism over the rate of movement of the long-run productivity curve for capital.

However, as I glance back at the general topic of this session, it is unamazingly borne in upon me that a part of the net impact of the papers we have heard is to the effect that full employment is anything but automatically assured—that, indeed, we must be very much on our guard. It is correctly implied that full employment is assured only if we act right. Now, there is among economists a vast amount of agreement bearing on what constitutes right action. Still, there remains a conflict of advice which is crucial when we come to specifics. The conflict is such that we dare not gloss it over but must, if we are to arrive at a stable consensus, keep it well to the fore. It derives most of its intellectual force from a third pessimism which one may add to Professor Fellner's Keynes-Hansen and Schumpeterian types; namely, cash-balance pessimism. This pessimism takes on its full vitality only in the atmosphere of the question of underemployment equilibrium. So I hope we shall not yet permit academic fashion to swing completely away from discussing the automaticity of full employment in as fundamental a sense as we know how.

When it comes to selecting means for the control of aggregate demand, it notoriously may make a great difference, in what devices one will espouse, whether he does or does not believe that changes in the real value of cash balances exert significant force. This issue is, of course, at the crux of the disagreements which may be broadly suggested by the old question whether pump-priming is properly descriptive of the kind of aid which employment may need. Our devices may enlarge cash balances period after period; but if these balances have no force of their own, we can expect no cumulative effect, and our priming can never cease, except by grace of fortuitous events. A decisive importance is then bestowed upon the question of just how large a deficit we can create. Here is derived support for the common belief that revenue variations cannot be adequate and must be mightily aided by varying public expenditure; for the question is made to appear to be, simply, how much of the decrease in tax payments will be spent, not how much expenditure will result from the decrease in tax payments plus the cash balances accumulating on account of the deficit. It may then be thought desirable deliberately to err on the inflationary side. Professor Hart, in his most recent book, finds it amazing that so little enthusiasm is evoked by the notion of holding the quantity of money constant except for a secular-growth factor; but a common de-emphasis of the power of cash balances seems easily to account for it, as he is unquestionably aware. It is quite possible that Professor Hildebrand would find, were the issue joined, a disap-

pointing lack of warmth toward his sane proposal to rely heavily upon open market operations. The effectiveness of bank-rate manipulation is considered merely by reference to the elasticity of demand for loans, subject to an implied *ceteris paribus* which allows nothing for effects of cash balances upon aggregate demand. The theory of financing a public deficit takes on a special character under this doctrine of passive money. We need not concern ourselves to leave intact the cash balances of the public or the surplus cash balances of the banks in hope they may "burn a hole in the pocket" of the holder, for the problem is simply one of activating money; and no strangeness will attach to a prescription that, to cure deflation the government shall borrow and to cure inflation the government shall—borrow. The dogmatics of a monetary religion thus become distinctly less than simple. The question of the propriety of the fractional-reserve feature of a banking system becomes old-fashioned, as the spirit of Adam Smith is resuscitated in the unfortunate form of the real-bills doctrine.

If we turn to the problem of selecting a guide to action upon aggregate demand, we find again disagreements which I doubt will be cleared up unless we frequently leaf through a well-kept record on the sources of disagreement, which goes back to and includes the argument over the automaticity of full employment. If we deny automaticity, it is clear enough how we thereby separate ourselves from those perhaps few who still advocate a traditional gold standard system. Now, possibly we ought to separate ourselves from these. There are things which make me less than ideally sure we ought: notably the fact that, having rejected gold standard international equilibration working through varying money incomes, we nevertheless refuse to repudiate the fixed exchange rates which are appropriate to only such a system, and thus we live in the fantasia of neo-cameralism suggested by the term "dollar shortage." In any case, I should like at least to see the lines of communication with gold advocates held a good deal more open than they seem to me to be.

It is less easy to see why, on the basis of logic, denial of automaticity of full employment should impede agreement upon some one of that group of relatively antideflationary guides which are the serious contenders for general acceptance; yet that denial seems clearly to have done so. In the fundamental model used, it was decided, wage reduction would not relieve unemployment. This conclusion was somehow extended to support an essentially unrelated proposition; namely, that, even under more favorable monetary conditions, a quantity of labor offered greater than the quantity demanded still should not be a signal for bidding down the wage rate. In general, those who did reach a conclusion unfavorable to automaticity felt little call, then, to rise up against encouragement of rigid or even of upward-pressing wage rates. The basic neglect of the influence of cash balances thus brought the tacit if not the active support of economists to a tendency all too little in need of encouragement; that is, the divorce of wage-rate determination and consideration of the demand for labor—an essential denial of the propriety of the word "system" in the term "price system."

A familiar, bitter fruit now flourishes which, while getting its flavor by no

means wholly from the tree of cash-balance pessimism, surely has, on the one hand, been nourished by it and, on the other, been hidden from the pruning knife of relevant discussion by the intellectual undergrowth which sprang so lushly from the same roots. The fruit is, first, as Professor Hart suggests, that no compelling majority of economist voices is heard in advocacy of any single, clear-cut guide to action upon aggregate demand and, second, that even were an otherwise good guide adopted, it might no longer have more than a fighting chance of success. Insofar as we have rallied effective support for any particular guide, it is surely for an index of employment—an essentially hopeless one. Probably this fact is reflected by Professor Hildebrand, even while he otherwise so distinctly points our thoughts on policy in desirable directions. While a constant price level is clearly his wish, the signal for positive action apparently turns out to be a certain degree of unemployment. The overweening attention to this guide plays a role in the burgeoning of that philosophy of "directed demand" which approves the direction of government purchases and defense plants to areas suffering unemployment and influences importantly our notions on international economic arrangements. The popularity of the employment index shows through the ready sympathy accorded the suggestion, of long-standing and recently-renewed fame, that the price level be raised by some per cent per year to allow for the upward-pressingness of wage rates—a program which might be described as a Machiavellian plan to frustrate that pressure for higher real wages which we have taught workers, or allowed them to be convinced, is an appropriate feature of a free enterprise economy, a program which would be rendered useless by its very adoption.

Thus, as these examples suggest, cash-balance pessimism and the resultant pessimism over the automaticity of full employment still are live sources of disagreement upon policy with respect to both guides and devices. Although my plea is for making sharp the general awareness of crucial considerations, I trust I have not really concealed my own conclusions of substance. Cash-balance pessimism in any decisive sense seems to me ill-founded, having been arrived at by some persons through simple osmosis, by others through illogic, and by perhaps none through striving bravely but in vain to find reason for rejecting the hypothesis. By the same token, I think, if we must choose between two simple statements—one that free enterprise does involve automaticity of full employment; the other that it does not—the correct choice is that it does. The reasoning basic to the opposite simple conclusion—where it does not rest on neglect, illogic, or Schumpeterian pessimism concerning especially wage rates—involves an assumption of monetary conditions which are so strange and so patently bad that one may reasonably wonder how a theorist thinking the assumption useful at all for our world could soon thereafter pay attention to anything at all but reform of monetary institutions. If the reasoning rests instead upon the well-founded wage-rate pessimism, I venture the following conclusion. What is pointed to is not that "free enterprise cannot supply full employment" but rather that economists are faced with a challenge; namely, to teach the citizenry that there is such a thing

as internal consistency in an economic machine. In this sphere I think—to stick to polite statements—we have not covered ourselves with glory.

KENNETH D. ROOSE: I am inclined to agree with Mr. Fellner's analysis of the secular problem of income and employment but not because the evidence is unequivocal. And, indeed, he admits that the issue remains open as to whether secular offsets to savings will prove to be adequate. Nevertheless, his criticisms of the Keynes-Hansen pessimism as premature and unsubstantiated by the empirical developments seem to me to be reasonable. In fact, I wonder if Keynes, in light of the tremendous expansion in capital goods during the postwar period which has taken place without depressing significantly the rate of return on capital, would be as disposed to pessimism about the vitality of future investment as some of his followers have been. It should be recalled that even in his notes on the trade cycle Keynes refused to place exclusive emphasis on the desirability of raising the average propensity to consume. Instead he also cited the importance of accumulating more capital goods in order to raise the standard of living, although he expected that the marginal rate of return on these goods would decline very rapidly. Since apparently this has not been the case, I would have expected him to have welcomed this demonstration of the resiliency of private investment and perhaps, as a consequence, to have modified some of the more pessimistic conclusions drawn from his analysis. Moreover, the fact that it now seems generally accepted that the consumption function rises secularly also supports Mr. Fellner's conclusion that the proportion of income saved does not have to rise over time.

Although the Keynes-Hansen pessimism seems premature to me, that of Schumpeter might be justified, but perhaps for somewhat different reasons, if Mr. Fellner's cautious optimism about the effectiveness of monetary and fiscal policies to prevent serious depression or inflation should prove unwarranted. Thus he believes that the present social system of the Western world could not survive some of the disturbances which it has weathered in the past. It may be argued, therefore, that a sharp collapse in the economy might bring emergency public measures of such drastic and widespread scope as to undermine permanently the prospects for private investment expenditures, long before the secular forces described by Schumpeter could bring the capitalist process to a halt. But if indirect controls succeed in moderating fluctuations, then there remains enough political and social flexibility to prevent the growth of these stifling forces.

My remaining remarks will be directed to the papers of Mr. Hart and Mr. Hildebrand. The topic considered by them is no stranger to the meetings of this Association. A review of the *Papers and Proceedings* reveals that sessions on various aspects of economic stabilization and forecasting have been held at every postwar meeting. In fact, this marks the third time during the period that Mr. Hart has addressed his able analysis to the problem. If, then, as he suggests, we face the prospect of a recession without well-developed plans for meeting it, the inadequacy is not due to a lack of professional analysis.

The many penetrating and constructive papers presented at these meetings should absolve the profession of any charge of gross negligence in this matter.

I think both speakers would agree that there is very little new in their papers but much that needs to be said once again. There is substantial agreement between the two as to the measures which should be employed to check recession. Also, in examining the problems of deflation, neither is willing to forecast near-term business activity, although Mr. Hildebrand attempts to assess the magnitude of the problem of continuing expenditures for full employment in 1954. Undoubtedly they are wise to recognize the inadequacies of our forecasting techniques. Nevertheless, I cannot help but wonder where this leaves those who are currently charged with responsibility for determining stabilization policies and must engage in limited forecasting. In the anxious search for better prophecy, however, I would caution policy-makers, if this should be necessary, to be wary of placing too much reliance on estimates of possible expenditure levels in 1954 such as those presented in Mr. Hildebrand's paper. In my judgment, the methods employed seem somewhat inappropriate to short-run forecasting and tend to err on the high side.

Specifically, it seems unwise to extrapolate inventory expenditures and gross private domestic investment expenditures on the basis of the recent annual rates of change. The calculation of personal consumption based upon annual rates of change during the postwar years also seems quite inadvisable since the relationship between consumption and income has been highly unstable over this period. Another assumption which seems very unlikely to me is that a very large part of the proposed tax reductions will be spent for investment and consumption. Mr. Hildebrand's estimates, if corrected at these various points, would indicate a level of unemployment approaching 7 per cent. This would be his signal for shifting from exclusive reliance on the present fiscal-monetary policies to more direct intervention by the government, including public works, increased unemployment compensation, and much more drastic tax reduction. I do not propose to substitute these estimates for those of Hildebrand, but conclude that favorable factors in addition to those which he assesses must appear if adjustments in the major categories of expenditures in 1954 are to be compensating.

The discussion by Mr. Hildebrand of the objectives of and framework for stabilization policy also seems open to criticism. The reasons for selecting the wholesale price level as the one to stabilize require elaboration. This guide was quite inadequate in the twenties. A second point of criticism here concerns his treatment of the relationship of long-run forces to short-run stabilization policies. General agreement can undoubtedly be obtained on the desirability of maximizing the long-term rate of economic growth, primarily through the expansion of the private sector of the economy. The reason for emphasizing this objective in examining the short-run problem of stabilization is not clear to me unless Mr. Hildebrand contends that the measures which are necessary to insure the long-run growth of the private economy in some way place special limits on the permissible role of government in preventing serious recession or depression. But he accepts most of the measures commonly thought to be appropriate for government stabilization

policy. This is not too surprising, however, because the avoidance of deep depression is absolutely essential to any successful long-term operation of the private sector of the economy. And, in the last analysis, this means the vigorous use by the government of the various measures proposed in these papers. Finally, I am inclined to question his suggestion that the basic problem for fiscal-monetary policies is rules for authorities. Certainly some rules are highly desirable. Even so, because of the crucial timing problems which are involved in successful countercyclical measures, the basic problem would still seem to be to enlarge the area of discretionary authority.

Since I agree with much of Mr. Hart's analysis, I close my discussion by joining with him to express concern that we face possible recession lacking well-developed plans for coping with it. Or, at least, to the extent that plans have been formulated, they are still scarcely out of the blueprint stage and are a long way from acceptance by business and labor groups and particularly by the legislative bodies that must enact and implement them. Accordingly, I also second his suggestion that in view of the uncertainty about business developments in 1954 we should direct a great deal more of our energies toward providing a substantive policy to moderate recessions which will build and merit general confidence.

# INSTITUTIONAL ASPECTS OF SAVING AND INVESTMENT

## THE STRUCTURE OF THE CAPITAL MARKET AND THE PRICE OF MONEY

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### I

The price of money is the annual rate of payment, expressed as a percentage, that is required in order to obtain funds for business enterprise. To the borrower it is the "cost of money," or the rate at which expected earnings are capitalized in the market. When the price level is stable, money respresents a given volume of resources and the "cost of money" is also the "cost of capital." Cost of money and rate of capitalization are therefore synonymous terms and will be used interchangeably whether they refer to bond yield, preferred stock yield, interest, rate of profit, or marginal efficiency of capital. The over-all cost of money to a firm is the weighted average of the bond and preferred stock yields plus the rate needed to attract equity capital. These amounts also include costs of flotation.

The cost of bond or preferred stock money is the yield in a competitive market. The price obtained for a given coupon gives the interest cost to the issuer which is the capitalization rate for expected contractual dollar payments. In order to find the capitalization rate for equity earnings, we need two sets of data: earnings and market price. The earnings data are not, however, past or present earnings but expected future earnings and are therefore not a simple objective datum but an estimate of investors' expectations which may be based on evidence of past behavior in the form of earnings-price ratios. The equity capitalization rate is accordingly a statistical inference subject to error in the premises. This error exists because we simply do not know precisely what expectation is being capitalized in a market at a given time. A stock may sell at $100 today and at $90 or $110 tomorrow. The change in price could result from either an expectation of a change in earnings or a change in the rate of capitalization.

Without discussing the method of ascertaining the equity capitalization rate, we shall assume that it can be determined subject to a margin of error. Then we shall investigate how bond, stock, and over-all capital-

ization rates are affected by the capital structure of the individual corporation and by the structure of the capital market.

Capitalization rates will be examined under three different conditions: (1) under the pure theory of the relation between risk and return; (2) in a hypothetical competitive market for capital composed of many individuals who try to equalize their marginal income from various types of securities allowing for differences in risk;[1] (3) in present institutionalized capital markets. The purpose of this threefold analysis is to form a judgment as to the manner in which the structure of the market affects the cost of money.

Of course, the best and simplest way to answer the last question would be to compare statistically the results obtained in two actual markets. But, alas, this procedure is not possible because the existing markets are all institutionalized whereas the hypothetical individualistic market has no concretion in reality. We are therefore obliged to compare the results obtained in the actual institutionalized market with the putative results in the hypothetical individualistic market.

## II

The capitalization rate for corporate securities represents pure interest plus some addition for risk. Risk exists because of the uncertainty of future earnings and capital values. In the absence of uncertainty, the capitalization rate would be the pure rate of interest, companies could carry a debt ratio of 99.99 per cent of total capitalization with complete safety, and pure profits would be nil or negligible. Such a situation is, of course, purely imaginary. (Commercial banks, who aim to eliminate risk, now have a 92 per cent debt ratio, ownership equity being about 8 per cent of total assets. They keep a 20 per cent reserve in cash, 35 per cent in government securities, lend on highly safe margins, and so are not a model for other enterprise.) Because our knowledge of the future is highly speculative, all estimates of risk are partly objective, partly individualistic and subjective. Objective estimates are grounded in knowledge of the industry and of the history of the firm, its past record and ascertainable future prospects. But this knowledge never can exhaust its subject. The future is not a simple extrapolation of the past. A large subjective element remains which affects our judgment and is reflected in the actions that determine the market cost of money. This subjective element is, moreover, probably more volatile and makes for wider market movements than is warranted by the facts, at least when these are viewed retrospectively. On the basis of combined subjective and objective criteria, it is, for example, now

[1] Whenever reference is made to equalizing income at the margin, we make the qualification "allowing for differences in risk." At this point we also neglect the tax factor.

generally agreed that risk in the electric light and power industry is smaller than that in manufacturing. Likewise, the present market judgment is that electric power is less risky than either gas distribution and telephones and has a lower cost of money.

Logically, the over-all cost of money to different industries varies directly with the risk and may be 6, 7, 10, 20 per cent, etc. If risk were the only factor affecting the cost of money, the latter would be independent of the type of securities issued by any company. The differentiation of securities would merely distribute the risk by reducing that of bondholders and preferred shareowners and increasing that of the equity interest. This apparent truth, however, appears to be belied by behavior of the market. Experience seems to indicate that capital structure does influence the over-all cost of money. Why this is so needs explanation.

## III

The essential difference between obligations of the same company lies in the priority of claim to earnings and assets. If only one security is issued, it bears all of the risk whether it be called a bond, preferred stock, or common stock, and would have the same value provided that the security could share in all of the earnings. (I ignore at this point the difference that might be made by the fact that interest payments are deductible as a cost before computing federal income tax whereas preferred and common stock dividends are not.) Similarly, if one individual owned all of the various types of securities issued, his risk would be the same. Legal differences in the event of insolvency or reorganization and tax policy will modify this result. If all of the securities were sold in "packages" of bonds, preferred and common, the risk to each owner would be the same as if it were all common stock. It follows accordingly that the over-all cost of money would be unaffected by capital structure if individuals could not differentiate risks.

## IV

The purpose, however, of differentiating securities is to sell them in markets to buyers who prefer to assume varying degrees of risk. They all, presumably, believe that the particular security they buy will maximize their income and capital in the long run, but the greater the risk the higher the return needed to sell the security. The risk of default in bonds varies inversely with their proportion to total capitalization. It is reasonable, therefore, to postulate that as the debt ratio increases and interest coverage decreases, bond yields will rise. As earnings are subjected to prior charges, the risk of common stock ownership will be increased, and the cost of equity money will also rise. The informed

investor will presumably watch both these ratios and switch from one security to another so as to equalize yields at the margin. This equalization of marginal returns would maintain a constant over-all cost of money regardless of the ratios which debt and equity bear to the total capitalization. That is at least the pure theory of risk and return, which is illustrated in Table 1.

TABLE 1
HYPOTHETICAL COST OF MONEY BASED ON 6 PER CENT OVER-ALL RATE OF RETURN
(Linear Relationship)

| COMMON STOCK | BONDS | BOND RATE | COMMON STOCK RATE | BOND COST | STOCK COST | OVER-ALL COST |
|---|---|---|---|---|---|---|
| | | | | ($) | ($) | ($ and %) |
| 100 | 0 | 0 | 6.0 | 0 | 6.00 | 6.0 |
| 90 | 10 | 3.3 | 6.3 | .33 | 5.67 | 6.0 |
| 80 | 20 | 3.6 | 6.6 | .72 | 5.28 | 6.0 |
| 70 | 30 | 3.9 | 6.9 | 1.17 | 4.83 | 6.0 |
| 60 | 40 | 4.2 | 7.2 | 1.68 | 4.32 | 6.0 |
| 50 | 50 | 4.5 | 7.5 | 2.25 | 3.75 | 6.0 |
| 40 | 60 | 4.8 | 7.8 | 2.88 | 3.12 | 6.0 |
| 30 | 70 | 5.1 | 8.1 | 3.57 | 2.43 | 6.0 |
| 20 | 80 | 5.4 | 8.4 | 4.32 | 1.68 | 6.0 |
| 10 | 90 | 5.7 | 8.7 | 5.13 | .87 | 6.0 |
| 0 | 100 | 6.0 | 0 | 6.00 | 0 | 6.0 |

In this table we assume that the bond yields and stock capitalization rates are a linear function of the capital structure.[2] This seems a reasonable postulate for a market composed of informed investors who are continuously seeking to maximize their profits. It follows that under these conditions the over-all cost of money would be independent of capital structure.

Debt policy is designed, however, to protect stockholders from possible loss and will vary with the willingness of management to risk such loss by trading on the equity. Industrials now carry a funded debt of about 12 per cent whereas the debts of railroads and utilities vary in the range of 20 to 50 per cent or more of total capitalization. A factor influencing present policy is the experience during the Great Depression when many companies went into bankruptcy because of high debt ratios. During the twenties no one seemed to think the debts of railroads too high; since then the same debt ratio seriously impaired their credit.

[2] It may be that the function ought to be geometric rather than arithmetic but I do not know how to choose between these two curves or any others strictly on the basis of probability. I have therefore chosen to use the linear function for the sake of simplicity and because the particular function used makes no essential difference in my conclusions. My contention is that the actual market deviates from either function by giving a changing over-all cost of money at different points on the scale. The quantitative deviation of the actual from the postulated cost will be greater or less depending on the postulated curve, but the type of difference will be the same.

Practically all the major railroads that failed did so because of inability to meet fixed charges, not because they had operating losses. Traction companies also had their heyday and decline. Today few question the wisdom of the high debts of utilities; tomorrow they may. Unless one can replace uncertainty with certainty, no one can say with any degree of certitude which debt ratio should be adopted by management in order to protect the long-run interests of stockholders and at the same time to provide the lowest long-run over-all cost of money. Only he who is able to peer into the future can supply the answer. It would furthermore be foolhardly to assume that the current behavior of the capital market is itself a great source of wisdom in this matter because it reflects current opinion, not knowledge of the future. Markets are volatile and follow fashions and cycles, and rating agencies can move bond ratings up and down after the fact. (It hardly needs mention that if no regard is had for continued solvency and the protection of the stockholder, the lowest cost of money might be obtained by bankruptcy proceedings and the use of receivers certificates. The equity money would thus be obtained cost free. The objective of low money costs must, therefore, be pursued within the limits made possible by maintenance of the capital contributions of investors.)

## V

Market data show that as a general rule the capitalization rates on stocks and bonds vary directly with risks but not directly proportionately, as might be predicted from the pure theory of risk. As a result, some combinations of securities in the capitalization will give lower money costs than others. What is the reason for this deviation of actual experience from the pure theory? Is it the absence of competitive conditions, the institutional structure of the market, or some other factor?

The "fact" to be explained is that, as shown in Table 2, the bond yield for, say, an electric utility does not rise as the debt ratio rises from 10 to 40 per cent or possibly 50 per cent. So powerful is the preference for safety that few bond buyers will switch into stocks simply because the debt ratio rises.

This being true, a company issuing a mortgage bond limited to 10 per cent of assets when it could issue a 50 per cent bond would be giving the buyer an "investor's surplus" in safety. Borrowers are, therefore, loath to provide a safety factor in excess of that required to sell their securities. Railroads, on the other hand, are not now in such a favorable position, though they did have a similar status in the decade ending in 1929.

The relation between risk and return might also be illustrated by the borrowing power of strong and weak companies. Companies with

a high credit rating can borrow at relatively low rates of interest, whereas those with a weak standing find it difficult to borrow at all from institutional investors, even at high rates of interest. This has given rise to the demand for institutions to furnish debt capital to small business. The existing preference of lenders is for a range of high

TABLE 2

HYPOTHETICAL COST OF MONEY BASED ON 6 PER CENT OVER-ALL RATE OF RETURN
(Nonlinear Relationship—Approximation to Actual Conditions)

| COMMON STOCK | BONDS | BOND RATE | COMMON STOCK RATE | BOND COST | STOCK COST | OVER-ALL COST |
|---|---|---|---|---|---|---|
| | | | | ($) | ($) | ($ and %) |
| 100 | 0 | 0 | 6.00 | 0 | 6.00 | 6.0 |
| 90 | 10 | 3.3 | 6.30 | .33 | 5.67 | 6.0 |
| 80 | 20 | 3.3 | 6.66 | .66 | 5.33 | 6.0 |
| 70 | 30 | 3.3 | 7.14 | 1.00 | 5.00 | 6.0 |
| 60 | 40 | 3.6 | 7.60 | 1.44 | 4.56 | 6.0 |
| 50 | 50 | 3.9 | 8.10 | 1.95 | 4.05 | 6.0 |
| 40 | 60 | 4.2 | 8.70 | 2.52 | 3.48 | 6.0 |
| 30 | 70 | 4.5 | 9.30 | 3.15 | 2.85 | 6.0 |
| 20 | 80 | 4.8 | 10.80 | 3.84 | 2.16 | 6.0 |
| 10 | 90 | 5.4 | 11.40 | 4.86 | 1.14 | 6.0 |
| 0 | 100 | 6.0 | 0 | 6.00 | 0 | 6.0 |

TABLE 3

HYPOTHETICAL COST OF MONEY BASED ON 6.5 PER CENT OVER-ALL RATE OF RETURN
(Approximation to Actual Conditions)

| COMMON STOCK | BONDS | PREFERRED STOCK | BOND RATE | PREFERRED RATE | COMMON STOCK RATE | BOND COST | PERFERRED COST | COMMON STOCK COST | OVER-ALL COST |
|---|---|---|---|---|---|---|---|---|---|
| | | | (%) | (%) | (%) | ($) | ($) | ($) | ($ and %) |
| 100 | 0 | 0 | 0 | 0 | 6.50 | 0 | 0 | 6.50 | 6.5 |
| 90 | 10 | — | 3.3 | — | 6.85 | .33 | — | 6.17 | 6.5 |
| 80 | 20 | — | 3.3 | — | 7.29 | .67 | — | 5.83 | 6.5 |
| 70 | 30 | — | 3.3 | — | 7.86 | 1.00 | — | 5.50 | 6.5 |
| 60 | 40 | — | 3.6 | — | 8.43 | 1.44 | — | 5.06 | 6.5 |
| 50 | 50 | — | 3.9 | — | 9.10 | 1.95 | — | 4.55 | 6.5 |
| 40 | 50 | 10 | 3.9 | 4.50 | 10.20 | 1.95 | .45 | 4.10 | 6.5 |
| 30 | 50 | 20 | 3.9 | 4.75 | 12.00 | 1.95 | .95 | 3.60 | 6.5 |
| 20 | 55 | 25 | 4.2 | 5.00 | 14.70 | 2.31 | 1.25 | 2.94 | 6.5 |

security, and outside of that range, debt money is hard to obtain even at high rates.

The issuing utility can increase debt up to possibly 50 per cent, depending on the company and the type of business, without increasing interest costs. It is difficult to prove this by comparing yields on 10 per cent debt bonds with 50 per cent issues because most companies otherwise comparable have quite similar debt ratios. The few cases available, however, tend to confirm this observation and to negate the pure theory. The reasons for this behavior of bond yields are two: confidence in the stability of the utility industry and the large volume of safety-minded money seeking investment. The rating agencies also take

the view that an electric utility bond, otherwise well protected, is an *A* to *AAA* security when debt is 50 per cent of total capitalization and could not rate it any higher if debt were only 10 per cent. We can only conjecture whether the future will bring about a change in this attitude.

In conclusion, I believe that actual interest rates would deviate from the linear risk-yield relation even in an individualistically competitive market so long as large masses of investors with abundant funds are dominated by safety of principal. This condition cannot therefore be attributed solely to the institutional structure. The latter, however, may exacerbate it.

In contemporary capital markets bond money is furnished predominantly by institutions and equity money by corporate savings and individuals. Included in the capital market are the Federal Reserve System and the commercial banks because they hold a large volume of bonds and mortgages and also because their operations directly and indirectly affect long-term interest rates. The other institutions of the capital market which channel individual savings into investment are the life, property, and casualty insurance companies, the savings banks, trust companies, public and private pension and trust funds, building and loan companies, and investment trusts.[3]

Investment trusts are the only group among these institutions investing predominantly in common stocks; university and college endowment funds hold about 30 per cent of their total assets in this form, and private pension funds about 25 per cent. Some expected that trade-union funds would be most in common stocks but thus far this has not happened. (Nathan Belfer, "Trade Union Investment Policies," *Industrial and Labor Relations Review*, April, 1953, page 335.) The United Mine Workers welfare fund of about 100 million dollars, for example, was held in cash and government securities.

The law has recently been relaxed to permit life insurance companies and savings banks to buy common stocks, but this has had little effect.

The reasons that investment institutions confine themselves to debt securities are so well known that they scarcely need mention. Those who entrust their savings to life insurance companies and savings banks are primarily interested in safety. They also desire a degree of liquidity. The liabilities of these institutions are fixed in dollars and the policy of management is to maintain the nominal value of assets equal to nominal liabilities and to earn a return consistent with such a policy. This, I believe, is the main factor. Stocks fluctuate over the cycle, and life insurance companies and savings banks would likely encounter runs from

[3] A broad discussion of the structure and operation of the capital market, including statistical data, may be found in *Institutional Investments, Law and Contemporary Problems,* Winter, 1952. Also see various chapters in *Savings in the Modern Economy, A Symposium,* edited by Walter W. Heller, etc. (Minneapolis, 1953).

policy holders whenever the current value of their assets fell below liabilities. The law is, of course, the limiting factor, but the statutes are a consequence of a desire for nominal dollar safety rather than a cause and could be amended if a strong desire existed on the part of insurance companies, savings banks, and their clients to substantially alter their investment policies.

## VII

Precise statistical estimates of savings are not a part of my task, and minor variations in such estimates would not affect my major conclusions. Raymond W. Goldsmith believes that personal saving amounts to 70 per cent of the national total; corporate saving to nearly 20 per cent; and government saving to approximately 10 per cent. (Heller, *op. cit.*, page 146.) We shall use these estimates.

Corporate savings do not generally enter the capital market. Only that portion above cash requirements is held in the form of government securities which is considered "temporary investments" to be liquidated when needed for other corporate purposes. Manufacturing corporations rely on corporate savings for equity capital, whereas utilities must finance predominantly by selling new stock, and railroads since the depression have bought new equipment out of earnings and equipment trust certificates. Corporate capital expansion in the United States required 180 billion dollars between 1946 and 1951, of which 35 per cent was financed from retained earnings, 22 per cent from depreciation reserves, and the balance through security issues. (Paul L. Howell, "Competition in the Capital Markets," *Harvard Business Review,* May-June, 1953, page 84.)

Corporate savings are the cheapest method of obtaining equity capital. For if corporate earnings were paid out as dividends, they would be subject to an average tax of about 33 per cent and a much higher marginal rate. Thus if the stockholder were to receive 100 per cent of earnings as dividends, pay income taxes of 33 per cent, and then reinvest the remaining 67 per cent, his increase in net worth would be just a third less than by use of the corporate savings device.

If, however, corporate earnings were paid out and then returned via common stock investment channels, the stock market would more truly reflect the cost of equity capital, but the total equity capital obtainable from dividend sources would be less than is obtained by corporate savings. The higher dividends paid under this scheme might raise market values of stocks, but the large offerings of shares would in turn depress them. The net effect of these two opposing forces on the amount of equity capital obtained can only be conjectured, but because of the tax factor it would likely be smaller than under existing practices. In my

view, it would be desirable to design our corporate tax law in such a way as to equalize the total burden of the tax (corporate plus personal) on high and low dividend pay-outs.

Corporate savings are therefore an important source of capital whose owners do not try to equalize returns at the margin. Corporate savings in steel are invested in steel, not in automobiles, merchandising, or other lines even if these might provide a higher return. Corporations do not buy bonds instead of equities on the basis of comparative risk and return. Corporate savings accordingly constitute a noncompeting fund of capital "costless" to management, and whose investment is not determined by alternative investment opportunities.

## VIII

From 60 to 70 per cent of personal saving which is 70 per cent of the total, and hence from 40 to 50 per cent of national savings, are applied through savings institutions who purchase high-grade debt. The balance of personal savings—about 20 per cent of the total—goes into direct investments in equities in homes, farms, other business enterprises, and in the purchase of securities in the open market. About 20 per cent, as we have seen, are available only for equity within the corporation. We omit from consideration the 10 per cent saved by government.

This admittedly sketchy description shows three basic noncompeting pools of savings: the institutional pool available for high-grade debt investment; the corporate savings pool available for corporate equity investment; and the remaining personal savings pool available for local investment and some portion for stocks and bonds in the open market. It is therefore the small increments in the last pool plus the loans made on securities to individuals, brokers, and dealers for the purchase of securities by speculators and investors that operates to equalize marginal returns between markets of different risks. This is, in all, a small quantity.

It is, of course, not necessary that all investors make adjustments at the margin for returns to be equated. Such equalization could be achieved if an influential number of investors did so. However, these facts appear to justify the view that the large volume of money available for debt investment depresses the yield unduly on high-grade bonds as compared to speculative bonds, or of common stocks,and also explains the absence of the linear relationship previously referred to.

Newly created money by the banking system is available initially only for high-grade debt. After that it follows the channels just described. A cheap-money policy thus aggravates the tendency inherent in our institutional structure to make debt money cheap and to cause a deviation from the linear relationship.

How do all these factors affect the over-all cost of money? For industrials, not at all. They earn what they can, and if they pay less for debt, they earn more on the equity. The corporations engaged in manufacturing have shown no important tendency to increase their long-term debt but still continue to rely on plowed-back earnings.

In the case of public utilities whose earnings are regulated by cost of money, the effect of cheap money and market structure has not been to increase the returns on the equity portion but to lower the over-all return on the entire investment. It is accordingly not the stockholder but the ratepayer who has benefited from the artificially low cost of money created by government monetary policy and by the institutional structure of the market. In states regulating public utility earnings on an original cost, nominal value basis, the utility consumer has gained by cheap bond money as well as by the decrease in the real cost of utility services due to inflation. The bondholder's real return has fallen because of both lower yields and the depreciated dollar, while the stockholder has lost from the latter cause.

The lack of mobility in the capital markets to which we have alluded holds between securities of widely different risks. It does not, however, obtain between different classes of high-grade securities. The life insurance companies watch differential yields closely and switch securities when it seems profitable. In the postwar period, they liquidated a large part of their government bond holdings and purchased the debt of business and industry, including utilities and real estate mortgages.[4] These switching transactions, however, do not directly affect the relative yields of high grades and low grades or the capitalization rates on common stocks. Past experience shows that institutional investors will not buy a speculative bond in the open market even if it sells, say, at 50 with a 12 per cent current yield, on their judgment that a diversified holding of such bonds will in the end be more profitable than investing at a 3 per cent yield in government or at 3¼ per cent in public utilities. They do not judge such a practice adversely; they simply do not judge it at all. If they had done so in the depression years, many would have made very substantial profits and taken only few losses. But the fact seems to be that they do not even consider many bonds rated below *Ba,* no matter what the yield is currently or to maturity. We must expect, therefore, that whenever any substantial number of bonds fall from grace they will go to a large discount in the market because of the restricted circle of prospective buyers. Or is it possible that institutions who hold most bonds today will cling to bonds bought with *Aaa* rating even if they go to *C*?

[4] This mobility is shown by Table 2 and Table 3, pages 28 and 29, of James J. O'Leary's article in ***Institutional Investments, Law and Contemporary Problems,*** Winter, 1952.

The underlying bases for the heavy debt in our financial structure are several: Institutional holdings necessarily reflect heavy governmental issues during the war when no other securities were available. Losses in the Great Depression also made many people more safety conscious. The desire for safety and liquidity is therefore much greater than it was in the twenties. At times during that decade common stocks sold at a lower earnings price ratio than bonds because of the great hopes for unlimited earnings in the future. Since then, this ratio has altered greatly from years of optimism to years of pessimism, with a recent tendency for debt money to be excessively cheap. (See the article by Roland Soule, "Trends in Cost of Capital," *Harvard Business Review,* April, 1953, pages 33-37.) Whether this tendency will be changed again by narrowing of yields and earnings ratios between different types of risks remains for the future to determine. Only the future also will tell us whether the conservative investment policies of our financial institutions are justified by experience; that is, it will show whether or not the spread between stock yields and low- and high-grade bond issues reflected actual differences in risk. Certainly, in view of the inflation, it is apparent retrospectively that the zealousness with which banks and some other institutions disposed of high yielding securities at low prices during the 1930-40 period was unwarranted. Investment ratings which make quality depend altogether on past performance will be as misleading in the future as they were with railroad bonds in the twenties and as they have been, in reverse, since then. If this should prove to be so, then the deviation from pure theory expectations will prove to be an error in financial judgment.

The underlying cause of the large pool of safety-conscious money is the democratization of income and savings that has taken place since 1940. The incomes and personal savings of the American people have been raised to higher levels. These savings flow into institutions and the institutions pursue a conservative financial policy, making for a plethora of high-grade bond money and a scarcity of equity money. The distribution of income in the United States before federal income taxes has been altered in favor of equality and since heavy progressive taxes are imposed on higher incomes, disposable income after taxes has increased more for the lower income groups than for the higher. Before the close of the Hitler war, it was indeed contended that this redistribution would be unfavorable to equity investment. The poor had had no experience in investing, and if their savings rose they would seek safety, not risk. It was even contended that in the interest of an expanding economy the progressive element in the tax system should be diminished. It was driving the savings of high-income groups into tax-exempt securities without at the same time assuring that the low-income groups would

provide risk capital. It is no doubt true that the large volume of available debt money—especially that portion going into municipals—is in part a consequence of high surtax rates on personal incomes. That the market must seek equity capital from the "average man" also seems to be the judgment of brokers and investment bankers who are making efforts to place common stocks with the general public. Personal income taxes may be said, therefore, to have the effect of decreasing the desire to take risks and increasing the desire for safe tax-free investments.

## IX

In spite of the apparent advantages gained from cheap money and the deductibility of interest expense for tax purposes, manufacturing corporations have not shown any significant tendency to increase the proportion of funded debt to total capitalization. Utilities have much higher debts, but since utility rates are fixed to yield a fair return after all expenses, tax savings inure to the benefit of the ratepayer, not the stockholder.

Rate regulatory commissions, consequently, have been urged recently to compel some utilities to increase the debt ratio further. Commissions possessing authority over security issues could do this directly. Others are urged to accomplish this end by indirection; that is, by refusing to allow a company a fair return on all common stock with the existing debt ratio or the ratio inherent in its financial policy. Inasmuch as the earnings that are allowed on the equity are presumed to be necessary to attract equity capital, computation of over-all cost of money on a lower debt ratio has the effect of forcing such a utility to increase debt or to suffer a reduction in per share earnings. It would be obliged to choose between these alternatives even if, in its judgment, a high-debt policy might expose stockholders to excessive risk and injure the long-term credit standing of the concern. Commissions generally hesitate to adopt such a far-reaching policy and to overrule company management; they also are reluctant to assume the role of avowed protagonists of tax avoidance. The high-debt policy is moreover at variance with the views developed after the Great Depression that equity financing should be encouraged and debt financing discouraged.[5]

The fundamental assumption of the advocates of heavy debt financing is that avoidance of federal taxes is a basic obligation that utilities and regulatory bodies have to the ratepayer and that the protection of

[5] The Committee on Corporate Finance of the National Association of Railroad and Utilities Commissioners, adopting a report of Commissioner Robert E. Healy of the SEC, supported three principles of financial policy: "(1) Keep the ratio of debt . . . at as low a point as possible. (2) Keep the ratio of common stock . . . at as high a point as possible. (3) Press the companies to adopt a program of systematic debt reduction." *Proceedings of the N.A.R.U.C.*, 1940, p. 399.

stockholders' interests should be subordinated to this obligation. Tax avoidance is the main aim of policy; high debt is merely the instrumentality and is not advocated for its own sake. It is, however, widely claimed that the rate of earnings on the equity need not and should not be increased commensurately with the thinning of the equity; and although it is recognized that this policy might be carried too far, it is hoped that the equity investment could be diminished further before stockholders effectively objected to the weakening of their position. In order to avoid all corporate income taxes, the bulk of common stock could, of course, be replaced by subordinated, perpetual, income debentures entitled to residual earnings, when, as, and if earned, and voting rights retained in a small stock capitalization. These debentures would actually be equity capital but would be called "debt" simply to avoid taxes. Thus the will of Congress could be subverted and corporate taxes avoided. This seems to follow logically from the tax avoidance doctrine.

Of course there is nothing ot prevent the Congress from amending the tax laws to overcome these revenue depleting devices; either the corporate rate could be increased further, interest not allowed as a cost, deliberate tax avoidance penalized, or personal income taxes raised. The alternative is a further deficit. Tax avoidance is an individualistic concept hardly suitable as a guide to public policy. When practiced on a large scale, it becomes tax shifting, which would merely change the type of tax levy, not the total collected, and is therefore deceptive as a real boon to the public. The heavier demand for debt capital which would result from greater tax avoidance would tend to raise interest rates (in the absence of an expansionary monetary policy). This increase, however, could hardly offset the "tax savings." A general revision of corporate policy through the manipulation of security issues along the lines mentioned above for the purpose of avoiding federal corporate income taxes altogether would be tantamount to a corporate rebellion against federal taxation. If practiced by utilities at the behest of commissions, it would constitute a refusal to act as tax collectors for the federal government. Such irresponsible policies are not in the public interest. They would probably also result in further deficits, a general refusal of the public to pay higher taxes, and further inflation.

The effect of taxes on the "cost of money after taxes" adds to the difficulty of finding an optimum financial structure. Would the debt ratio be as great as it now is if interest costs were not deductible as expense? And what would happen to the demand for debt money and the interest rate if interest were not deductible? Presumably, thus far, companies have not completely rationalized tax avoidance but have subordinated it to considerations of traditionally sound financial practice. If tax

avoidance should become a major aim of financial policy—and assuming no Congressional interference—a financial structure containing heavy debt which actually raised the over-all "cost of money before taxes" might actually be cheaper to the ratepayer than one with a lower initial over-all cost of money but containing a smaller component of deductible interest charges. Such a topsy-turvy world is the logical outcome of high taxes and a complete rationalization of corporation finance according to the tax avoidance doctrine.

An optimum financial structure traditionally was conceived to be one that protected the interest of stockholders by using only an amount of debt that would insure the company against the vicissitudes of economic life over the cycle and the long term. The stockholder chose the amount of risk he cared to assume and gained or lost by trading on the equity. However, the concept of the optimum debt ratio as commonly used subordinates these considerations to one factor: the cheapest over-all cost of money; and the optimum capital structure is defined as one that will produce the cheapest money regardless of other effects. We have seen that pure theory (neglecting the tax factor) would make the over-all cost of money the same regardless of capital structure. Each position on the scale would be an optimum one that distributed risk and return differently to creditors and owners. Concern with the idea of the optimum arises from the lack of linearity already discussed.[6] This lack is in turn a consequent of the absence of knowledge of alternative investment opportunities, unwillingness to take advantage of them, immobility of investment funds for reasons pertaining to personal psychological attitudes toward risk and safety, law, and the institutional structure of the capital market. From this viewpoint, we now offer a definition. An optimum capital structure is one that maximizes the profit of the security issuer accruing from the failure of the market to equate risk and return at the margin.

The optimum ratio is not a constant but varies with the state of the money market and with the attitude of investors over the business cycle. It becomes different whenever interest and capitalization rates change or whenever the preference of investors for risk and safety shifts. The optimum is thus an average ratio purporting to take all these factors into account. In a bull market, common stock may be sold easily; in a bear market, with difficulty or not at all at a reasonable price. Debt costs will fluctuate markedly with Federal Reserve policy as well as with the business cycle. Because of these and other uncertainties and the continuous changes in the relative attractiveness of different types

[6] In looking for the optimum, a committee of the N.A.R.U.C. concluded that "the proportions of various types of securities in the security structure do have a substantial effect on the annual cost of capital to the particular utility." *Proceedings*, 1940, p. 420.

of investment, the capital structure providing the lowest costs is constantly shifting with investors' expectations. The optimum ratio even in the narrow sense is therefore not a point but a range (this was also the conclusion of the N.A.R.U.C. report of 1940, page 420), and if we broaden this concept to include the safety of equity investment, the range is widened further.

Within the range of the optimum, some variations in the capital structure may be found individually and socially advantageous in periods of prosperity and depression. During good times it may be desirable to maintain ample borrowing power for possible future needs at a time when the stock market may be depressed. From the national viewpoint, new investment should be undertaken when national income threatens to fall. The benefits arising from such a policy far exceed the illusory "savings" to the body politic from tax avoidance. The large flow of investment funds into savings institutions is not likely to be suddenly impaired by slack business; so that it is imperative that they be put to work by private borrowers in order to avoid additional federal deficit financing. Regularization of investment is inherently difficult, but that is simply another reason why a purely financial obstacle should not be placed in its way.

We conclude that there are inherent tendencies in our economy making for low interest rates on high-grade securities. These tendencies are re-enforced by the structure of the money market, by monetary policy, and by high personal income tax rates, and tax-exempt securities. Given this structure, a large supply of investment funds is likely to be continuously available for high-grade bonds even during periods of slack business, and corporate financial policy should be adapted to use such funds. Cheap money and so-called "tax savings," however, cannot be, and thus far have not been, the sole or even main determinants of corporate financial policy. The capital structure of individual companies, in their own and in the public interest, should be guided by cost of capital, by continued availability of funds, by preservation of credit standing, and by the objective of maintaining their continued solvency as a going concern.

# THE INSTITUTIONAL SAVING-INVESTMENT PROCESS AND CURRENT ECONOMIC THEORY

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As so often happens, the title of this paper was decided upon far in advance of its actual preparation. Now that the paper has been written, I am by no means certain the title accurately describes the contents, but I have retained it for lack of a better one. As will be apparent, the subject is treated in a selective way and the discussion is not characterized by the comprehensiveness which the title suggests. It should also be understood that the paper is not, as I fear will be obvious, based on exhaustive coverage of the literature. In spite of this, I hope that it will provide some fresh thoughts on the subject.

Perhaps it will be helpful at the beginning to define the sense in which "institutions" and "investment" are used here. The former refers to savings institutions such as life insurance companies, private pension funds, state funds, mutual savings banks, savings and loan associations, and similar institutions. These institutions are thought of in terms of their role as financial intermediaries. The term investment should be understood to mean financial investment in the sense of an institutional investor purchasing securities, mortgages, or in general what is referred to as "claims on wealth." Except where especially indicated, it does not mean investment as usually employed by economists, in the sense of expenditures for industrial plant and equipment or durable capital. It is true, of course, that to a limited degree financial intermediaries do make direct investments in the latter sense in income-producing properties, but the term as herein used is confined to financial investment.

The central idea set forth in the paper may be outlined as follows: (1) An increasing proportion of the saving being done by Americans is flowing through savings institutions, and an increasing proportion is taking a contractual form. (2) Theoretical discussion of investment assumes that decisions are made by individual investors; i.e., that the individual saves and then decides whether to hold his saving in cash or to buy a bond, a stock, or some other capital asset, and it is apparently assumed implicitly that decisions made by financial officers of institutions are but conglomerate decisions of a large number of individuals. (3) Actually, the investment decisions which govern the corporate bond and mortgage market today, and to a large extent marketable government securities, are decisions made by financial officers of institutions.

(4) The investment decisions made by these financial officers are not at all made along the lines of the motivational pattern which theoretical discussion attributes to individuals. (5) This has important implications for the theory of investment and for general economic theory, particularly interest-rate theory. (6) It is also important for public policy that we understand better the motivating forces behind institutional investment.

The general argument to be presented here is not new. It has, however, received greater recognition in the "Gesellian underworld" of financial papers than in professional economic literature.

## I. *The Growth of Saving Through Institutions—and in a Contractual Form*

The increasing proportion of personal saving through savings institutions is a matter of common observation, but we now have available a new source of information on this trend. Raymond Goldsmith, in his authoritative study of saving covering the period 1897-1951, shows that changes in the distribution of personal saving among forms of saving during the period are characterized by "a considerable increase in the share of saving through consumer durables, life insurance, and pension and retirement funds, and by a decline in the share of saving through corporate stocks and bonds, mortgages and real estate."[1] He further finds that in terms of economic types of saving, it is clear that the shares of "relatively illiquid" forms of saving, of contractual saving, and of saving through financial intermediaries (including government and private pension and retirement funds) have shown an increasing trend (*ibid.*).

Likewise, Goldsmith's study of selected asset holdings of financial intermediaries shows how the importance of institutions has increased since the turn of the century.[2] For example, financial intermediaries increased their share in mortage loans from 55 per cent of the total in 1900 to 72 per cent in 1949. Similarly, they increased their share of holdings of corporate and foreign bonds from 35 to 86 per cent, and domestic stocks from 8 to 24 per cent. These figures include the commercial banking system as a financial intermediary, but the detailed tables show that the savings institutions alone accounted for a large part of the increased share of financial assets held by institutions.

[1] R. W. Goldsmith, *Study of Saving*, Vol. I, Chap. I (in process of publication with Princeton University Press). For an excellent discussion of the growth in institutional saving, see C. H. Schmidt and E. J. Stockwell, "The Changing Importance of Institutional Investors in the American Capital Market," *Law and Contemporary Problems*, Winter, 1952, pp. 3-25.

[2] R. W. Goldsmith, *The Share of Financial Intermediaries in National Wealth and National Assets* (National Bureau of Economic Research, Occasional Paper), Table IX (in process of publication).

Along similar lines, studies by Grebler show that from 1896 to 1950 institutional lenders increased their share of the total of nonfarm residential mortgages outstanding from 50 to 80 per cent.[3] Within this total, life insurance companies increased the share of their holdings from about 6 to 20 per cent; savings and loan associations from about 16 to 24 per cent; commercial banks from 5 to 19 per cent; and the share of mutual savings banks declined from 20 to 13 per cent. With developments which have occurred in the past three years, the share of financial institutions in nonfarm residential mortgages outstanding is undoubtedly even higher today.

The predominant position of savings institutions in the nonfarm real estate mortgage market as a whole, including commercial as well as residential, is shown by the fact that out of a total increase of 52.9 billion dollars of nonfarm mortgage debt during the period 1946-52 inclusive, a combined amount of 33.9 billion, or 64 per cent of the total, was added to the holdings of savings and loan associations, life insurance companies, and mutual savings banks.[4] Of the balance, 10.6 billion dollars was added to the portfolios of commercial banks, a substantial part of which was undoubtedly related to the growth of time deposits. During the same period, 1946-52, net long-term corporate debt increased by 31.5 billion dollars, and during that period life insurance companies alone increased their holdings of corporate bonds by 19.1 billion, or about 60 per cent of the net increase in all long-term corporate debt.[5] The bulk of the remainder went, of course, to other institutional investors.

But this is enough in the way of figures indicating the increasing proportion of personal saving flowing through savings institutions and in a contractual form, as well as the dominant position today of savings institutions in the securities and mortgage market. The purpose of reciting these figures is, of course, to establish the size of the flow of funds in which institutional investment decisions are the governing factor. The increasing proportion of contractual savings administered by institutions needs emphasis because such savings are in a sense and to an important degree committed, although not irrevocably, and decisions with respect to their investment must reside with financial officers of institutions regardless of developments in the capital market.

[3] L. Grebler, D. M. Blank, and L. Winnick, *Capital Formation in Residential Real Estate—Trends and Prospects* (National Bureau of Economic Research, in process of publication).

[4] E. T. Bonnell and J. A. Gorman, "Changes in Public and Private Debt," *Survey of Current Business*, September, 1953, Table 6, p. 18.

[5] *Ibid.* For net increase in life insurance company holdings of corporate bonds, see *The Life Insurance Fact Book* (1953), pp. 64-66. The figure 19.1 billion dollars slightly overstates the case for it includes foreign corporate bonds.

## II. *The Assumption Made in Current Economic Theory That Investment Decisions Are Made by Individuals*

Turning now to the second point in my argument, namely, that current economic theory assumes that investment decisions are made by individual investors, the reasoning seems to run along these lines. An individual saves and decides whether to hold his saving in cash or to buy bonds, stocks, or some other asset, ranging from a completely liquid asset such as cash to a completely illiquid one. If individuals or people, the reasoning holds, expect bond prices to rise (yields to fall), they will hold less cash and even borrow money in order to hold more bonds, and they will shift to longer maturities; but if they expect bond prices to fall (yields to rise), they will try to hold more cash, switch to short maturities, and delay purchases of longer term bonds. The term bond is used categorically in the literature to describe any debt instrument or even stocks. The literature, written in terms of the individual investor, assumes that all investors (or at least those of key importance) are traders and the "speculative motive" is considered to be the key motive with everything hinged on expectations. The idea of "liquidity preference" which has come so prominently into theoretical discussion in recent years is framed almost entirely in terms of individual investors, although efforts have been made, as discussed later, to force institutional investors into the mold of liquidity preference.

What is the evidence, if any is needed, for my assertion that investment decisions are assumed to be decisions of individual investors? No one would deny, I suppose, that Keynes in the *General Theory* had a great deal to say about the motivating forces underlying investment decisions, and a careful reading of the *General Theory* indicates how completely Keynes's thinking revolved around individual investors. Consider, for example, this statement in the *General Theory* which is typical:

> . . . Just as we found that the marginal efficiency of capital is fixed, not by the "best" opinion, but by the market valuation as determined by mass psychology, so also expectations as to the future of the rate of interest as fixed by mass psychology have their reactions on liquidity-preference; but with this addition that the individual, who believes that future rates of interest will be above the rates assumed by the market, has a reason for keeping actual liquid cash, whilst the individual who differs from the market in the other direction will have a motive for borrowing money for short periods in order to purchase debts of longer term. The market price will be fixed at the point at which the sales of the "bears" and the purchases of the "bulls" are balanced.[6]

Or consider another typical statement by Keynes as follows:

> It should be obvious that the rate of interest cannot be a return to saving or waiting as such. For if a man hoards his savings in cash, he earns no interest, though he saves just

[6] J. M. Keynes, *The General Theory of Employment, Interest and Money*, p. 170. For similar passages showing Keynes's assumption that investment decisions are made by individual investors, see pp. 158 ff., 166, 169 ff., and 196-197.

as much as before. On the contrary, the mere definition of the rate of interest tells us in so many words that the rate of interest is the reward for parting with liquidity for a specified period. (Pages 166-167.)

Everything in the *General Theory* concerning investment decisions assumes that they are made by individual investors—the "rentier class." This runs through the discussion of the speculative motive for holding cash, and it characterizes Keynes's famous "musical chairs" discussion about the way the American stock market behaves. A. P. Lerner, in his article which was approved by Keynes, underlines the importance of individual investment decisions in Keynes's thinking by pointing out that in the *General Theory,* "the rate of interest is what people pay for borrowing money. It is what people who have money—cash—obtain from lending it to other people instead of holding it themselves." (*The New Economics,* edited by S. E. Harris, pages 129-130.)

Actually, so far as I can discover, there are only two minor references in the *General Theory* to institutional investors. A passing reference is made, during the description of professional investment as a process of "anticipating what average opinion expects average opinion to be," to the "long-term investors," illustrated in a footnote as an investment trust or an insurance office (page 157). The long-term investor is mentioned as being different from the professional investor in that he is not dominated by the short-run gambling aspects of the market. The other reference is in the concluding chapter in which, in discussing whether it would be wise to proceed further with measures to redistribute incomes more equally, it is concluded that it is unnecessary to worry about the growth of capital because "experience suggests that in existing conditions saving by institutions and through sinking funds is more than adequate" (page 373). The almost total disregard of institutional investment is all the more surprising in view of Keynes's position as a director of a British insurance company.

There is no need to illustrate further the way in which other theorists have similarly assumed that the pattern of motivation which is governing in investment decisions is that of individual investors. Suitable references are to be found in a footnote.[7] Since there is general recognition

[7] See, for example, J. R. Hicks, *Value and Capital,* Chap. XI, XII, and XIII (Hicks recognizes the importance of institutions, but he casts them in a speculator role and tends to fit them into the individual motivational pattern); B. Ohlin, "Some Notes on the Stockholm Theory of Savings and Investment," *Economic Journal,* June and September, 1937; O. Lange, "The Rate of Interest and the Optimum Propensity to Consume," *Economica,* February, 1938; *The New Economics,* Chap. XLV and XLVI (A. P. Lerner); H. S. Ellis, "Monetary Policy and Investment," *American Economic Review,* March sup., 1940; W. J. Fellner and H. M. Somers, "Alternative Monetary Approaches to Interest Theory," *Review of Economic Statistics,* 1941; L. R. Klein, *The Keynesian Revolution,* Chap. IV; J. Tobin, "Liquidity Preference and Monetary Policy," *Review of Economic Statistics,* May, 1947; S. E. Harris, "Money Demand and the Interest Rate Level," *Quarterly Journal of Economics,* February, 1950; J. C. Gilbert, "The Demand for Money," *Journal of Political Economy,* April, 1953; A. H. Leigh, "Supply and Demand Analysis of Interest

today of the great importance of institutional investment, it must be that a further assumption is made implicitly to the effect that what is held to be true for individuals with respect to the pattern of motivating forces behind investment decisions must also be true of financial officers of institutions.

This assumption, which seems so obviously contrary to fact that it is hard to believe, is perhaps no more incredible than the classical economist's assumption that because of Say's Law there cannot be any involuntary unemployment. Economic theory does not lack instances of elaborate reasoning based on completely unrealistic assumptions.

### III. *The Factors Governing Institutional Investment*

Let us turn now to an examination of the factors which actually do govern institutional investment, and it should be remembered that my discussion is limited to savings institutions. Do these institutions, in their investment decisions, in fact follow the same motivational pattern as might be attributed to a rational individual investor? Before answering this question, it should first be admitted that we unfortunately do not know as much as we should about the motives and forces underlying institutional investment. Here is an area sorely needing careful research.

Perhaps the life insurance companies, where I feel more confident of my ground, might be taken as an example. There is additional justification in this in view of the important part played by life companies in the capital market, as indicated earlier.

Without attempting to be exhaustive, there are several characteristics, or forces, governing life insurance company investments which seem pertinent to this discussion. First, there is the regular, uninterrupted flow of life insurance company funds into investment. As a general rule it is typical for life companies at virtually all times to keep fully invested. Trying to guess the future of interest rates is an avocation of many life company financial officers, but as a general rule the financial officer does not make his investments on the basis of expectations. Rather, he strives in the main to keep fully invested at currently prevailing rates, or he commits to deliver funds in the future at current rates. The typical financial officer stresses the cost, in the way of foregone interest, of trying to guess a change in rates and he figures that

Rates: a Further Attempt at Synthesis," *American Economic Review*, September, 1951, especially p. 584; *Monetary Policy and Management of the Public Debt* (Joint Committee on the Economic Report), Part 1, pp. 95-96, replies of the Secretary of the Treasury. R. V. Rosa, in his excellent article, "The Revival of Monetary Policy," does point out that the test of the effectiveness of flexible monetary policy and resultant interest rate changes "is not primarily its effect upon borrowers' decisions, nor even upon savers' decisions, but rather upon the decisions of the institutional investors who dominate the credit supply. . . ." (*Review of Economic Statistics*, February, 1951, p. 32.)

under most circumstances and on the average he would be better off to invest the money at the going rate than to hold funds liquid in expectation of a rate rise. He places his faith in dollar averaging and compound interest. The very practice today of making forward commitments on direct placements at current rates bears this out. It may be true that a company occasionally shows the influence of expectations in its investments, but, by and large and particularly for the more sizable companies, the inflow of funds is so large that there is little practical alternative but to roll the funds out into investment just as promptly as possible.

Changes in life insurance company holdings of cash and short-term government securities have sometimes been cited as evidences of institutional changes in liquidity preference or as reflecting changes in expectations regarding interest rates.[8] Such changes are usually so small that I find it hard to see how much significance can be attached to them. The individual monthly figures on cash holdings of the life insurance business during the period 1949 through 1953, for example, show that the monthly range was a low of 1.1 per cent of assets in several months of 1953 and a high of 1.7 per cent in April, 1951.[9] If monthly figures combining cash and governments with a maturity of one year and under are studied, the range during the same period was 1.4 per cent of assets in July, 1949, and 3.5 per cent of assets in April, 1951. Although the percentage changes are substantial, the proportion of assets is so small that cash and short government changes do not have much importance. If anything, one must be impressed with their stability.

But in order to appraise these changes, it is necessary to explain why they occur, if not because of liquidity preference or because of expectations on interest rate changes. Examining the figures, we find that during the period 1949-53 the only sudden and sizable change in cash and short governments occurred beginning in November, 1950, and extending to April, 1951. In this short period the figure rose from 2.2 per cent of assets, or 1,226 million dollars, to 3.5 per cent of assets, or 2,034 millions. Thus cash and short governments increased by 808 million dollars, or 66 per cent, in the short space of five months. In view of the fact that these were the months leading up to the "accord" between the Federal Reserve and the Treasury, there would be a temptation to infer that the life companies increased their liquidity in anticipation of a rise

[8] See, for example, H. Jones, "The Optimum Rate of Investment, the Savings Institutions, and the Banks," *American Economic Review,* May, 1948, pp. 333-336. Also, *Monetary Policy and Management of the Public Debt,* Part 1, pp. 85 and 88, replies by the Secretary of the Treasury; pp. 387-388, reply by the Chairman of the Board of the Federal Reserve System.

[9] These figures are based on the asset distribution of forty-nine life companies which report each month to the Life Insurance Association of America. This series, including companies having nearly 90 per cent of total life company assets, has been chosen because it is the only one providing a breakdown of short- and long-term governments.

in interest rates. Actually this reasoning would be almost completely erroneous. The reason for the build-up of cash and short governments in this period was in the main a mechanical or technical one. In the late summer of 1950 and early autumn, the discussions preceding the adoption of Regulation X led to a huge build-up of residential mortgage loans sought by borrowers trying to "beat the gun" on the regulation. The outcome was that life companies and other mortgage lenders heavily increased their residential mortgage commitments. The expansion of cash and short governments was related directly to this increase in mortgage commitments and was occasioned by a desire to be certain that funds would be available to honor the commitments as they fell due.[10] This is not to say, however, that the expectation of a rise in rates may not have been of some minor influence. Looking at a longer period, for example, 1936-53, we also see a high degree of stability of cash held by life companies as related to assets, with the percentages being higher in early years when it was more difficult to invest funds promptly and lower in later years when investment outlets were more readily at hand. At no time during this period did cash represent more than 4.7 per cent of assets, and changes in cash were usually gradual.

If life insurance companies acted on the basis of expectations, we would expect to see evidence at certain times of borrowing by life companies to take advantage of expected changes in interest rates. The fact is, however, that life companies seldom borrow to take advantage of expected rate changes. The reason for this is a strong tradition in the business against borrowing for investment purposes, which is based on the feeling that a savings institution should not resort to borrowing. It is true, of course, that borrowing does take place in small degree or in comparatively rare instances, but it is more likely to be explainable in terms of technical reasons such as meeting commitments.

In addition to the regular, uninterrupted flow which is typical of life insurance company investment, a second characteristic of life companies as investors is that they are not traders of securities. Instead, they are true long-term investors in the main in that they purchase securities to hold for income. This is not necessarily a matter of pure choice because the size of life company holdings of corporate securities makes it difficult to dispose of holdings. Moreover, the greatly increased importance of direct placements, mainly industrial securities, militates against trading because direct placements are not rated or quoted in the market. The importance of direct placements in life company portfolios is shown by the fact that 65 per cent of corporate bonds held by life companies at the end of 1952 had been acquired directly. In the category of industrial

[10] For a similar explanation, see *Monetary Policy and Management of the Public Debt*, Part 2, p. 1283, reply by E. J. Pattberg, Jr., First Boston Corp.

and miscellaneous bonds, the corresponding percentage is 90 per cent. A study made in 1951 for a subcommittee of the Committee on Interstate and Foreign Commerce showed that during the period 1934-51, inclusive, sixteen major life insurance companies acquired 19.9 billion dollars of corporate securities via the direct placement route.[11] Of this total, only 243 millions, or 1.22 per cent, were resold during the same period. Thus, life insurance companies as a whole are not traders of securities or mortgages, the latter having been taken for granted. It should be noted, however, that trading does occur to some extent, but it is an exception to the general rule.

A third characteristic of life insurance companies as investors which I think is pertinent here is the high degree of stability and the magnitude of their net cash inflow, which makes the idea of liquidity preference have little meaning for them. Our studies of the life insurance business indicate that even in the bottom of the Great Depression the life insurance business as a whole generated enough income to meet disbursements without the need to liquidate holdings. Certainly today the life companies have an exceedingly liquid or fluid operation as shown by the fact that on an annual basis cash received from net income over disbursements, repayments on mortgage loans, sinking fund payments on industrial loans, maturities, and similar sources exclusive of sales of existing holdings, total an estimated 8 billion dollars, as compared with the annual rate of increase in assets of about 5.5 billion. Amortization of mortgages and sinking fund payments on bonds have in particular greatly increased life company liquidity. In addition, life companies still hold nearly 10 billion dollars, or about 13 per cent of assets, in U.S. government securities providing a still further margin of liquidity. Under these circumstances, it is difficult to see how liquidity preference or the "fetish of liquidity" can have much meaning for life companies as a whole.

Another characteristic of the life insurance company investment process is the surprisingly large extent to which it is affected by regulatory and mechanical or operational matters. As is commonly appreciated, an extensive body of state laws prescribes the investments which are legal for life insurance companies. While these laws have been broadened over the years to give life companies proper latitude in their investments, they still exert a strong influence on investment decisions. Another influence of the same type exists in the form of resolutions adopted by the National Association of Insurance Commissioners prescribing the manner in which securities held by life companies are to be valued in annual statements. Here again, these resolutions, determining

[11] *Study of the Securities and Exchange Commission*, 82nd Cong., 2nd Sess., Report of the Committee on Interstate and Foreign Commerce, p. 130.

whether bonds can be carried at amortized cost or whether they must be entered at year-end market price, have a definite influence on investment decisions. Of a somewhat different nature, the field organization for procuring mortgage loans, regardless of whether it happens to be a "correspondent" or a "branch office" system, exerts a great deal of influence on investment decisions of life companies. A company, for example, might believe it wise in terms of investment return to reduce investment in mortgages for the time being and to shift more funds into corporate bonds. The extent to which this would be done would be affected by concern for the mortgage organization in the field. Possibly another influence of the same type is the objective which each life company has in regard to proper portfolio balance.

Still another characteristic of life insurance company investment is the great mobility of the flow of funds, both as to type of outlet and geographical location of investment. As mentioned above, state laws and regulations do establish limitations on life company investments, but these limitations have been revised in recent years so that they have become less and less restrictive as to type of outlet. Moreover, life companies have a high degree of freedom in determining the geographical location of their investments in response to yield differentials. The mobility of life company investments, both as to type and location, is undoubtedly much greater than in the case of other institutional investors, but even in the latter case mobility is improving.

Finally, I would like to indicate one other important force affecting life company investments. As is widely appreciated, in determining premium rates for life insurance contracts, a company makes definite assumptions, not only about mortality experience and expenses, but also about the rate of return it will be able to earn on invested reserves. An assumed or guaranteed rate of return on investments is also characteristic of the operation of the various types of pension funds. Time does not permit a detailed discussion, but I submit that, in considering the question of whether or not there exists a floor below which the long-term interest rate will not fall or cannot be driven by monetary policy, it will be much more fruitful to analyze the influence of such forces as the guaranteed rate and similar institutional factors rather than that of liquidity preference.

Thus far I have limited myself to considering the characteristics of and the forces governing life insurance company investments. I hope it will be agreed that the pattern of forces motivating investment decisions by the financial officers of life insurance companies differs a great deal from the motivational pattern assumed for individuals in theoretical discussion. The question which will be asked is whether the pattern of motivating forces governing the investment decisions of other savings

institutions is similar to that of life insurance companies. I do not have the time to go into this question in detail, and a great deal of research would be necessary in any event, but it seems likely that because of their contractual nature, pension funds and state funds would exhibit many of the same characteristics as life insurance companies. Speaking in general terms, personal trust funds, mutual savings banks, and savings and loan associations would probably have in some degree many of the same characteristics; i.e., the flow of their funds into investment is probably quite regular and uninterrupted at currently available rates without being greatly influenced by expectations of rate changes. Liquidity considerations are undoubtedly more important, but even here the amortized mortgage and sizable holdings of U.S. governments tend to reduce considerably the emphasis upon liquidity in investment decisions. It goes without saying that the influence of a contractually guaranteed rate affects only such institutions as pension funds and state funds.

Let us turn now to a consideration of how the difference between the assumed pattern of motivation in terms of the individual investor and the actual pattern of motivation governing investment decisions by savings institutions affects some of our current economic theory.

## IV. *Implications for Economic Theory*

As foreshadowed earlier, the general argument made here has its most important implications with regard to some of the theoretical views of J. M. Keynes, particularly the liquidity preference theory of interest, which is widely regarded as holding a place of central importance in the *General Theory*.[12] In brief review, Keynes held that the rate of interest is not a payment for saving but is rather a payment required to overcome the preference of people to hold cash.[13] The rate is determined by the demand for and the supply of money. The demand schedule for cash Keynes called "liquidity preference," and it is the intersection between the liquidity preference schedule at various interest rates and the supply of money that determines the rate of interest. The higher the rate of interest the greater the cost of holding money and the smaller the amount people would want to hold. Conversely, with an increase in the amount of money outstanding, the rate of interest would fall until people wanted to hold the larger amount of money. They are induced to

[12] See, for example, *The New Economics*, pp. 69 (R. F. Harrod states that Keynes's "theory of interest is, I think, the central point in his scheme") and 127 (A. P. Lerner, in referring to Keynes's general theory, points out that "the crux of the matter lies then in the theory of the determination of the rate of interest"). L. R. Klein, in *The Keynesian Revolution*, states that in the Keynesian system the interest theory is "the solution to the entire set of equations which is based on the liquidity-preference building block" (p. 97).

[13] *General Theory*, Chap. 13, particularly pp. 166-168; *The New Economics*, pp. 129-130 (A. P. Lerner).

desire to hold more money by the decline in the rate of interest, for then to some people the convenience and feeling of security in holding cash can be satisfied to a greater extent because the cost is less.

In considering the various motives people have for holding cash, Keynes regarded the "transactions" and "precautionary" motives as being more or less constant and he felt that the "speculative" motive was the key one because of its variability (*General Theory,* pages 195 ff.). He pointed out that liquidity preference in terms of the speculative motive "mainly depends on the relation between the current rate of interest and the state of expectation" (page 199). He felt that the speculative motive is "particularly important in transmitting the effects of a change in the quantity of money" (page 196). It is by "playing on the speculative motive," he contended, that monetary policy is made effective, for the demand for money to satisfy the transactions and precautionary motives is generally "irresponsive" to any influence except an actual change in general economic activity and the level of incomes, "whereas experience indicates that the aggregate demand for money to satisfy the speculative motive usually shows a continuous response to gradual changes in the rate of interest; i.e., there is a continuous curve relating changes in the demand for money to satisfy the speculative motive and changes in the rate of interest as given by changes in the prices of bonds and debts of various maturities" (pages 196-197).

Keynes further suggests the "possibility . . . that after the rate of interest has fallen to a certain level, liquidity-preference may become virtually absolute in the sense that almost everyone prefers cash to holding a debt which yields so low a rate of interest."[14]

What are some of the important policy implications developing out of Keynes's liquidity-preference theory of interest? It underlies the idea of a stagnant economy found in the *General Theory* conceived of as a country of advanced economic growth in which the marginal efficiency of capital has fallen to a level below the floor on the interest rate caused by liquidity preference reaching an absolute level (pages 219, 309, 327-328). It also is the basis for Keynes's belief that because of liquidity preference there is a point below which monetary management loses its effectiveness in bringing about lower interest rates and greater investment expenditures. It is thus the basis for Keynes's reliance upon public investment as the basic source of restoring high employment in an advanced economy.

How do the ideas of Keynes on interest rate determination, as well as the implications, square with the institutional investment process? There is no need for me to go into detail on this question for my

[14] *General Theory,* p. 207. At an earlier point 2 per cent is suggested as being the critical level (p. 202).

position has been set forth to a considerable extent in an earlier part of the paper. The investment decisions which are governing in the capital market today are decisions made by institutional and not individual investors. The pattern of motivating forces assumed for individuals in Keynes's theory holds little meaning when it is examined in terms of institutional investors. The various characteristics of and forces governing institutional investment decisions—the regular, uninterrupted flow of funds into investment, the emphasis on dollar averaging and the relatively slight influence of expectations, at least in the Keynesian sense, the policy of keeping fully invested, the absence of a trading approach, the lack of any real meaning to the idea of liquidity preference, the importance of regulatory and mechanical matters, and the importance of a contractually guaranteed rate of return—all of these things sound foreign to Keynes's hypothesis. They are the basis for grave doubt in my mind that the liquidity preference theory contributes much to an explanation of interest rate determination in the American capital market today. Moreover, recognition of the importance of an assumed or guaranteed rate of return in contractual forms of saving such as life insurance requires some new thinking about whether there is a floor below which the long-term interest rate will not fall or cannot be driven, and if so, what are the forces determining it.

If Keynes's liquidity preference theory of interest is inadequate to explain the determination of interest rates in the modern American capital market, how then are rates determined? Time does not permit more than a few words in answer to this question, but it is my view that the correct explanation is to be obtained along the lines of theory dealing with the demand for and supply of "loanable funds."[15] I believe that it has been fruitless to attempt to reconcile the liquidity preference and the loanable fund theories because the former does not have much real significance. It seems to me that interest rates are determined basically by the demand for and the supply of loanable funds. At any given time the supply of loanable funds comes from current savings, past savings possibly, and bank credit. These funds, channeled through or created by institutions, compete actively for available investment instruments. In classical theory, bank credit was ruled out as a source of capital funds because, on the assumption of full employment, an increase in the money supply was supposed to result in an offsetting increase in prices. Capital formation in real terms could only arise out of savings. In an economy characterized by unemployment, however, bank credit can be a source of real capital formation because it draws idle resources into employment.

Basically, therefore, the interaction of the demand for and the supply

[15] See references to Ohlin, Hicks, Lerner, and Fellner and Somers in footnote 7.

of loanable funds determines the interest rate or various interest rates. Central bank policy exerts a key influence on both short and long rates by altering the reserve position of commercial banks and hence the available supply of bank credit. Under the Federal Reserve policy of early spring of 1953, the supply of loanable funds to meet the demand had to come primarily from savings institutions, and with the restricted availability of bank credit in the face of heavy demand for funds, it was inevitable that rates should rise. As the year progressed, however, the shift in Federal Reserve policy toward an easier reserve position for commercial banks increased the availability of loanable funds and, along with a moderate decline in demand for funds, rates inevitably declined. It would be a mistake to deny that expectations have an influence in the determination of rates, but in the main rates are determined by the flow of funds into the market and the demand for these funds.

There is one other point which I would like to make along the lines of the theoretical implication of the increasing influence of savings institutions in the capital market. This has to do with the nature of our modern capital market. As I mentioned earlier, the growth of institutional investment has undoubtedly led to greater mobility of capital, both in terms of variety of outlets and geographically. Moreover, it has undoubtedly led to an improved state of market knowledge about investment outlets. On the other hand, the growth of institutional investment, looked at in terms of purchases of investment media, has introduced a larger degree of oligopsony or monopsonistic competition into the capital market. The capital market as a whole has, moreover, become more closely integrated, partly because of the close similarity of a government insured or guaranteed mortgage to a government bond. Finally, largely through the influence of direct placements, which are a phenomenon associated with institutional investment, the investment banker's role has changed considerably from that of an underwriter of a security issue to in many cases simply an agent finding loans for institutions. This means a large change is needed in our theoretical discussion of corporate financing.

## V. *Public Policy and Institutional Investments*

Before concluding, I would like to comment briefly upon several public policy considerations growing out of the foregoing argument. First, economists have in the past tended to reason about the effects of credit and debt management policy primarily in terms of the commercial banking system. It seems clear, however, that with the institutionalization of saving and with the greatly increased integration of the capital market, the effects of credit or debt management policy are sometimes

greater in the case of savings institutions than in the case of commercial banks.[16] Concentration upon the commercial banking system will fail, therefore, to provide a full understanding of the effects of credit or debt management policy. What I have in mind here might be illustrated by two recent policy actions. The Federal Reserve–Treasury accord, for example, followed by the decline of U.S. governments below par, undoubtedly had its most important effects through savings institutions and their lending activities, primarily in the mortgage market. With the Federal Reserve supporting government bond prices at par or better, savings institutions were invited to shift from governments to mortgages and corporate bonds, and their disposal of governments led to increased commercial bank reserves. The "accord" largely terminated this situation. Or to take an even more recent example, the Treasury offering of 3¼'s in the spring of 1953 had its greatest effect through savings institutions and again in the mortgage market, particularly the market for government-insured and guaranteed mortgages. What happened was that the 3¼'s came out in an already overcrowded market and set off a rise in corporate bond and conventional mortgage rates. The insured and guaranteed market suffered because of the rigidity of rates in this area.

All of this suggests, I believe, a need, in formulating policy, to understand better how savings institutions will react to policy stimuli. Without taking the time to try to supply the answers, some of which I have already tried to supply in part at least earlier, I suggest the following as the type of questions on which public policy-makers need better answers about savings institutions: (1) Is a decline in prices of government securities below par effective in drying up institutional sales of governments; i.e., will institutions hesitate to sell governments at a loss? (2) Does a decline in the prices of government securities below par tend to impair the surplus of savings institutions and hence lead to a loss of public confidence in them? (3) Would a decline in government securities prices cause a liquidity problem for savings institutions? (4) If interest rates were expected to rise, would savings institutions strive to increase their liquidity; i.e., increase their cash and short governments? (5) Do savings institutions have a preference for liquidity? Is there an interest rate level below which they will simply accumulate cash and wait for a rise in rates? (6) If the rate on long-

[16] For a recognition of this, see R. J. Saulnier, "An Appraisal of Selective Credit Controls," *American Economic Review*, May, 1952, pp. 247-263; W. Thomas, "Recent Experience with Monetary-Fiscal Measures to Combat Inflation," *ibid.*, pp. 273-288; R. Murray, "Federal Debt Management and the Institutional Investor," *Law and Contemporary Problems*, Winter, 1952, p. 216; R. V. Rosa, "The Revival of Monetary Policy," *Review of Economic Statistics*, February, 1951, p. 31; and J. Tobin, "Monetary Policy and Management of the Public Debt: Patman Inquiry," *Review of Economic Statistics*, May, 1953, pp. 122-125.

term governments rises, will savings institutions increase their purchases?

All of these questions were considered in the Patman inquiry, and elicited a wide variety of answers showing how uncertain policy-makers are about the reactions of savings institutions.[17] I am tempted, in conclusion, to say something about the last question; namely, if the rate on long-term governments rises, will savings institutions increase their purchases. Briefly, under current conditions savings institutions regard government securities as a residual investment—something to buy if other outlets are not available in sufficient volume to absorb all funds. Because of the high degree of liquidity, or rather the stability and magnitude of net cash inflow, in most savings institutions, the liquid nature of governments is not an important influence in institutional investment decisions. It is widely held that if the Treasury is willing to pay a competitive rate, it can attract funds in competition with private demand for funds. The experience in the spring of 1953 with the 3¼'s indicates that in periods of overwhelming private demand for funds the United States Treasury finds it difficult to compete even on terms which many would regard as quite generous. The reason is, of course, that in a like period a rise in the rate on long-term governments tends to push up corporate bond and mortgage rates and governments still fail to be competitive.

## *Conclusion*

In summary, the main burden of my remarks is that the theory of investment, and particularly interest-rate theory, needs to be recast to take account of the fact that the investment decisions which are governing in the capital markets today are made by financial officers of institutions and not by individual investors. This is true because the pattern of forces motivating institutional investment decisions is not at all like the pattern which has been assumed for individual investors and followed generally in current theory. If we study the process of investment in terms of the institutional investor, we are bound especially to assign a much reduced role to liquidity preference and expectations in the determination of interest rates, and at the same time to adopt a loanable funds approach. Finally, since monetary and debt management policy today has such important effects through savings institutions, we are sorely in need of a better understanding of how institutions are likely to react to different types of policy stimuli.

[17] *Monetary Policy and Management of the Public Debt,* Part 1, pp. 85, 87-88, 109, 111, 372, 380; Part 2, pp. 697, 879, 880.

# MONETARY POLICY AND THE STRUCTURE OF DEBT

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## I

The title of my paper may suggest that I have something to say about short-run problems of public debt management. My real purpose, however, is to urge the enrichment of monetary theory. I am proposing that it be articulated into a more elaborate and inclusive discipline that may be called "finance theory" or "debt theory."

For reasons I shall list shortly, it seems to me desirable that conventional monetary analysis should be regarded as the climax, on a highly aggregative level, of a general theory of finance. The models of monetary theory consolidate the economic system into two sectors: the monetary and the real sector, with the latter sometimes dissected into a domestic and a foreign sector. The only debt that survives this consolidation is debt owed to or by the monetary system. Since federal deficit finance has become a habit, the traditional model has been disaggregated a little more, so that there is also a sector for government. More debt survives in this model and, accordingly, figures in behavior equations. I am suggesting that we push further with the disaggregation so that our models include still more varieties of debt, specifically the major classifications of debt owed by and held by private nonbanking institutions and households.

Say's Law is an objection to the first step in disaggregation, sectoring out the monetary system. The law may be paraphrased to say, "We owe money to ourselves." There were vigorous objections to the second step in disaggregation, sectoring out the government. These objections were essentially, "We owe the public debt to ourselves." The same kind of objection may be heard again as it is proposed to sector out consumer debt or business debt not held by banks. But just as the stock of money or the public debt may affect behavior on markets for real things, even though in accounting exercises money and public debt can be made to disappear by consolidation, so private debt appears to belong in equations describing behavior in the real sector of the economy.

Monetary analysis has had to do with two issues. First, it considers the impact of specific controls on one kind of debt: money. Second, it considers the impact of changes in the stock of this debt on demand for

productive factors and their output. A more inclusive theory of finance would have to do with the stock and structure of debt, including money, and with the impact of changes in this stock and structure on factor and commodity markets.

May I hasten to disclaim any originality in making this suggestion? Along with others, Fisher, Hicks, Klein, Marschak, Hansen, Boulding, Musgrave, and Hart have demonstrated the need for a theory of debt and assets to supplement or supplant conventional monetary theory. I am converted to their way of thinking.

## II

There are many reasons to bring other categories of debt than money into our central core of reasoning about employment, output, income, and prices. One reason is that in the United States and presumably in all growing economies money debt is a decreasing share of total debt, and financial assets in the monetary system are a decreasing share of total financial assets. There is a secular decline in the fraction of their financial assets that firms and households hold in money form and in the fraction of their debt that they owe to money-creating banks. An increasing share of financial assets and liabilities is only indirectly responsive to banking or monetary techniques and policies.

In its conventional garb, monetary theory is so general that it cannot contribute as usefully as one might wish to studies of economic growth. It has no systematic way, for example, of explaining why and how the problems and procedures of central banking change in the growth process. It is not competent to analyze the relative decline in demand for money that creates opportunities for other saving and investment institutions than banks. Because of this lag in analytical technique, the role of money, debt, and finance in growth has probably not been given its due.

Following the *General Theory* and various inquiries into the response of business investment to changing interest rates, monetary policy and techniques fell into low repute for short-run economic management. More recently there has been a revulsion against this de-emphasis of monetary controls. Monetary controls appear to have been more effective than our theory would lead us to expect. The result is a series of *ad hoc* amendments to the theory: the Pigou effect; the impact of policy on expectations; the influence of moving rates of interest as distinct from moved rates; the role of institutional lenders in magnifying the impact of central banking action; capital rationing and other restraints that characterize imperfect markets for loan funds. The theory that monetary techniques are impotent is being patched in

a random sort of way. A systematic reconstruction of monetary theory in a general context of debt theory should give us a more conclusive way of explaining why monetary techniques and policies succeed.

In our efforts to consolidate monetary theory with the theory of saving and investment, we have shown some uneasiness over the restrictions of conventional monetary thought. For example, we have stuttered over the definition of money, sometimes narrowing it down to currency and demand deposits and sometimes extending it to include a variety of other claims or potential claims. We have not always been clear about the context in which money is relevant and the context in which we need to talk about liquidity in general or even finance in general. Our instinct has been right, that financial position as a whole rather than cash balances alone conditions the volume and direction of spending; but we have still to take the logical next step of thinking as carefully about supply and demand functions for nonmonetary debt as we have about supply and demand for cash.

Many of us have been dissatisfied with the casual treatment in monetary analysis of the financial circulation as distinct from the income circulation. At times we have supposed that nonbanking finance is a frictionless medium for transmitting the impact of monetary phenomena to the real sector. At other times the financial circulation has been regarded as a subsidary whirlpool of funds, involving a very small part of the money supply and having little relevance to the central determinants of output and employment. As we become aware of the influence of nonbanking finance over consumption and capital formation, we must wonder whether we have done justice to the financial circulation. Justice cannot be done until we have thought through the meaning and consequences of excess supplies or excess demands on markets for nonmonetary debt.

In the past two decades there has been a mushroom growth of federal financial agencies—the trust funds, mortgage and farm credit institutions, agencies to finance business. Are such agencies essential to general growth? How should their operations be co-ordinated with monetary policy? We have no theoretical standards for optimal performance in these areas of finance. A succession of monetary crises and the obvious hazards of developing central bank techniques entirely by trial and error forced us into refinement of monetary analysis. A succession of fiscal crises and the accumulation of public debts have compelled us to think hard about debt management and its relationship with monetary management. By now we should be persuaded of the need to consider systematically other elements of the governmental credit structure than money and Treasury securities.

For these and other reasons, it is important to extend credit theory

beyond the limits of monetary theory and public debt theory. Fortunately, masses of data are being supplied to us that will suggest hypotheses and permit tests of hypotheses about the role of debt in economic behavior. Data on national and sectoral balance sheets will permit us to study relationships between debt and physical asset accumulation. Data on money flows will permit us to study rather than guess about relationships between financial and income circulations or gross and net circulations of money. Data on financial institutions will yield new insights into the effect of debt on the saving and investment process. Data on consumer finance, by various classifications of consumers, will suggest more realistic hypotheses about the restraints that accumulating debts put on consumption and about the effect of consumer debt on cyclical stability. Extension of credit theory is feasible now as well as desirable.

## III

I propose to experiment very superficially in applying general debt analysis to a few issues that we usually discuss in terms of the partial debt analysis of monetary theory.

Physical assets accumulate in the process of economic growth. Prolonged net investment results in an upward trend of the capital stock aggregatively, per capita and per unit of output. Financial accumulation accompanies physical accumulation. Monetary theory explains part of this financial accumulation, accounting for the rise in money balances by changes in real income, in price levels, and in other factors.

Monetary theory attempts to define an optimal rate of accumulation for one form of claim or debt—money—and attempts to explain consequences that follow, principally in the short run, if the actual rate deviates from the optimal rate. The quantity equation is one of its explanatory devices, helping us to see that, given a real rate of growth in output and a compatible evolution of price levels for output, there is an optimal trend in the money supply. Either a more rapid or less rapid monetary expansion burdens the economy, retarding or complicating or distorting its growth process.

A general debt theory would explain nonmonetary as well as monetary financial accumulation. A kind of quantity equation could be one of its explanatory devices. The monumental researches of Mr. Raymond Goldsmith and others are giving us time series to measure the growth of both debt and real assets. A ratio, named by Mr. Goldsmith the financial interrelations ratio (FIR), may be taken of financial assets to physical assets at any moment. The debt-quantity equation then can read: accumulated debt at current prices is equal to the accumulated physical wealth at current prices times the FIR. The debt-quantity

equation differs from the money-quantity equation in these respects: debt in general replaces specifically monetary debt; FIR replaces velocity; the value of accumulated wealth replaces the value (PT) of one period's income flow.

Perhaps for any given real volume of physical wealth and any given price level of goods, there is an equilibrium level of the FIR. If the actual level of financial accumulation exceeds this equilibrium level, or if it falls short, if there is an excess supply of debt, or an excess demand for it, we may say that the burden of debt in the economic system is too heavy or too light. If the structure of an excessive debt is, in some sense, biased toward liquidity so that on balance it stimulates spending, the outcome may be inflation of commodity prices and conceivably a temporary rise in the real rate of growth. If the structure of an excessive debt is, in some sense, biased toward illiquidity so that on balance it deflates spending, the outcome may be a collapse in security values, with a lesser decline in commodity values and possibly a retardation of real growth.

A normal FIR, like a normal velocity of money, expresses the public's desire to hold financial assets. Normal FIR appears to be an increasing function of the stock of wealth, while velocity appears to be a decreasing function of real income. The demand for financial assets in general, like the demand for money, is sensitive to other factors than wealth or income. Both are subject to institutional determinants that change significantly only in the long run. The FIR, moreover, rests on a complex of motives, more intricate than the familiar precautionary and speculative motives for holding money. These motives have created the very wide markets for the security issues of government, nonfinancial enterprise, and institutional saving media.

Given the demand for financial assets at any stage of economic development, the degree of financial stability depends partly on the rate of issue of financial assets and partly on the pricing of financial assets; that is, on the structure of interest rates. We have been able to explain moderately well the debt issues of the monetary sector. A generalized theory of debt requires that we explain the debt issues of other sectors.

The point of these remarks is that the habits of thought we have learned in analyzing one segment of debt—money—may be a sound prototype for analyzing the debt aggregate and its structure. They should be, since for creditors money is one of many optional forms of financial asset and for debtors banks are one of various sources of loan funds. Money-creating and money-holding are one of the institutional aspects of saving and investment. Debt creation generally and financial asset holding are the entire institutional aspect of saving and

investment. The general phenomenon should be subject to the same analytical discipline as any major part of it.

May I turn to a second exercise in debt theory? Traditional monetary analysis commonly takes the volume and structure of nonmonetary debt as a datum. Yet all of us realize that monetary policy reverberates through the debt structure as a whole. Its impact on real variables is conditioned by the way in which the debt structure responds. This implies that the speed, force, and locus of impact are not the same in all economic systems or in one economic system at all times. Given techniques of control are not always optimal. Direct controls over consumer credit are a case in point.

The typical brief in favor of consumer credit controls as a restraint on demand for durables pays no heed to the entire financial position of consumers and to the range of financial options that is available to many if not most households. It is based on the notion that a restraint on one source of spendable funds will retard one specific disposition of spendable funds. Since consumers in this economy commonly have alternative sources of spendable funds and alternative dispositions, limits on consumer credit may be a very inefficient device for inhibiting purchases of durables. The purchases may be made despite the credit restraint, at the expense of current or previous accumulations of financial assets or at the expense of current purchases of nondurable goods and services. In any case, since prior and current accumulations of financial assets are grossly uneven between consumers of different strata, the incidence of direct or qualitative credit controls can be irrationally and unfairly discriminatory.

Aggregative annual data for the United States in 1948-52 hint that the demand for durables is dependent not on credit availability but on such variables as income, family status, and price expectations. If credit is available, it is used to finance consumer purchases. If it is not available, consumers buy durables anyway by drawing on financial assets or by diverting income that would otherwise have gone to financial accumulation.

Aggregatively it appears that consumer credit controls, in our most recent experiment with them, limited the stock of financial assets, not the stock of durable goods. If this is so, consumer credit controls under present circumstances in this country are not selective in the usual sense. Like the so-called "quantitative controls," they impose financial stringency. They impose it regressively by income level. If this is so, consumer credit controls should not be one of our monetary techniques. Yet they may be appropriate in other monetary systems where the asset, debt, and income status of households is less comfortable and flexible.

I referred to consumer credit because it seems to me an apt illustration of the point that techniques of monetary control need to be adapted to the general debt structure. May I press the point one step further?

Nonbanking financial institutions—insurance companies, savings and loan associations, pension funds, etc.—are suppliers of distinctive services. The demand for these services, such as insurance or safety and liquidity of savings, is generated in the growth process by increasing income per capita, by sorry experiences with other kinds of financial asset in the cyclical crises that have been part and parcel of the growth process, by the evolving pattern of income distribution—in general by the historical experience of the given economic community. Each community at each state of development is virtually certain to have its own distinctive pattern of institutional finance.

The nonmonetary debt of these institutions is adapted to the services they supply. Their financial assets are administered by management and regulated by government to assure an adequate margin of income over costs of supplying services to creditors. The policies of management and regulation are designed according to the nature of services that the firms sell and to the terms of creditor contracts.

This complex of institutions which develops in response to demand for specific services, and which is administered and regulated to assure continuity of these services, is not necessarily the complex of financial institutions that is best for other purposes. Our own complex does not appear to have been optimal for supplying venture capital, so that the practice of financing capital formation by retained earnings has been essential to growth. It has not been a satisfactory source of farm or housing credit, so that government institutions have been invented for the purpose. The point of more immediate interest to me is that the financial structure which emerges from a specific growth process has its own distinctive way of reacting to and transmitting the impact of monetary controls. This is not necessarily the way that is most compatible with effective monetary policy for short-period stability of money flows, for long-period growth at comparatively stable price levels, or even for such primitive objectives as pegging interest rates.

Our progress in explaining how the system of nonbank financial institutions in this country reacts to and transmits monetary pressures has been rather less than sensational. The "pin-in" effect of rising long-term interest rates on instituitional lending does not appear to be substantial. We know so little of the market practices of nonbank financial institutions that the significance of the capital rationing they do under tight money conditions is not clear. I for one cannot guess whether the requirements under which they operate make for long-run inflation or deflation in commodity prices. It is not yet apparent whether

the growth of contractual savings arrangements is going to dampen or intensify the pace of cyclical downturns and the responsiveness of a recessive economic system to monetary stimuli.

Data are coming to us that will facilitate solutions for these and related problems. Useful solutions would be promoted, too, by theoretical inquiry into the influences that all significant varieties of debt may have on the behavior of firms, financial and nonfinancial, and households. I do urge that these theoretical inquiries should be the occasion for expanding the theory of money into an inclusive theory of debt and finance.

## DISCUSSION

SUSAN S. BURR: My remarks will be directed to the monetary aspects of the papers, with special reference to Mr. Shaw. A focal point of the discussion in two of the papers, as in monetary discussions of recent years, is the interrelation between monetary developments and saving and investment. I have selected Mr. Shaw's paper because it takes a broad approach to the needs for analysis in this area, and also because the paper confuses me on a number of points that seem of major importance.

Mr. Shaw has addressed himself to a postwar problem with which we are all familiar. Institutions with varying functions for handling the public's funds have played an increasingly important role in influencing the rate and direction of money flows in the economy. Their impact on the volume and use of credit has become more closely similar to that of banks. Their potential influence upon the maintenance of economic growth and stability is very great. This has resulted in an increasing emphasis on the study of these institutions as an integral part of the study of monetary developments.

On this general problem Mr. Shaw has stated his purpose clearly. He would extend the area of analysis from money debt to all debt and would deal with the impact of debt in general on the economy.

A major corollary in his general debt theory approach which recurs throughout his paper is that one of the prime purposes of analysis is to consider the impact of controls on debt, and through them on the economy. Early in the paper he specifies that one of the two issues considered by monetary analysis is the impact of specific controls on one kind of debt: money debt. Shortly after, he makes the point that monetary theory has no systematic way for explaining why and how the problems and procedures of central banking change in the growth process. (This statement, incidentally, needs amplification in order to be clear.) And, still later, he characterizes consumer credit control as an apt illustration that techniques of monetary control need to be adapted to the general debt structure.

Three areas of confusion impressed me in Mr. Shaw's discussion. They do not constitute, however, an adverse criticism of the paper as a whole. He has summarized in a stimulating manner one of the most promising research approaches today to monetary problems.

To some extent my queries relate to a general risk in the structure-of-debt or the money-flows approach to the economy. Those exploring the broader approach are likely to lose sight of much that is already known and understood about the economy. The various types of nonbank financial institutions that contribute to over-all money flows have been well identified and the significant characteristics of their operations have already received considerable study. Study has provided more than mere data. Data have been used currently and intensively for some time to evaluate the relative importance of varying influences of these institutions in monetary developments. Many of the problems posed by Mr. Shaw have already been analyzed even though solutions may not have been found.

My first query relates to the type of explanatory device suggested for the aggregative debt approach. Mr. Shaw proposes a quantity equation which would relate over-all debt to total physical assets. The basic relationship would be a ratio from the to-be-published Raymond Goldsmith material. It is called the Financial Interrelations Ratio, or FIR for short. It is the ratio of total financial assets at current prices to total physical assets at current prices. In Mr. Shaw's equation approach, accumulated financial assets at current prices would equal accumulated physical assets at current prices times FIR. Analysis would focus on an optimal or equilibrium FIR. Changes in FIR would be interpreted in terms of excess supply of or demand for debt obligations, with related impacts on liquidity, spending, and so on.

The over-all ratio developed by Mr. Goldsmith is very effective for describing long-run tendencies in the economy. It is not clear, however, that it would be equally useful for analyzing the impact of aggregate debt. I will pass over the problem of availability of data. At the present, I believe, estimates or approximations underlying the ratio have been built up for nine key years of the fifty-three years of this century, and estimating problems have been great, especially the current pricing of important sectors of both financial and real assets.

Here are a few points that puzzle me in the proposed use of the ratio for general debt analysis: (1) The financial assets on which the ratio is based include equities—that is, ownership of equity securities and of unincorporated businesses—as well as debt claims. Such figures as I have seen indicate that equity financial assets—held largely by nonfinancial sectors of the economy—account for at least half of total financial assets. Accordingly, continuation of an equilibrium level of the FIR might merely reflect offsetting changes in values of equity financial assets and of debt claims, or a change in FIR might reflect merely a change in total equity assets at current prices. How shall we deal with these equity financial assets in the debt approach? (2) Another point. Can the FIR be useful for evaluating short-run tendencies that may be the forerunners of longer term changes? After all, policies for regulatory purposes seem to be directed primarily toward preventing short-run tendencies from becoming longer term. Even if it were feasible to construct approximations of aggregate debt and aggregate physical assets at frequent intervals, the changes by months or even by years would be very small, in relation to outstanding amounts, and accordingly the changes in an FIR would probably be very small indeed. Could such changes be interpreted effectively? (3) Carrying this a little further gives a final point. One begins to wonder about the significance of a ratio of total debt to total physical assets. Perhaps a relationship between increments by periods in both debt obligations and physical assets would be a more significant explanatory device.

After developing the over-all approach, Mr. Shaw emphasizes the need for detailed inquiry into the influences that all significant variables of debt obligations may have on the behavior of businesses, financial and nonfinancial, and households. He illustrates with a discussion of consumer debt and consumer behavior. This approach to our current problems in monetary

analysis is not unlike that of many others today. Mr. O'Leary's discussion of the characteristics of life insurance company operations and their effects on the flow of funds is a distinguished contribution to this type of analysis.

This brings me to my second general query. What emphasis is to be given commercial banking in the aggregative debt approach? Commercial banks apparently would be considered merely as one group of financial institutions. I have read the paper pretty carefully and find no hint of any distinction between an expansion in the volume of money debt and a change in the rate of flow or use of money. Bank reserves are not even mentioned.

How far should we go in permitting the identity of bank deposits or money debt to be lost among other debt? As a matter of fact, as conventional monetary analysis has been elaborated in recent years to take account of impacts of money-volume changes that are effected through the operations of various nonbank institutions, we have really been forced to refine our study of the special role played by the commercial banks. The importance of the so-called "money creating" function can be illustrated by the fact that more than one-fifth of the increase in total debt in the three years 1950-52 reflected an increase in the volume of transactions debt; that is, demand deposits and currency. Incidentally, it may be significant that this ratio decreased substantially from 1951 to 1952 and further in 1953. Probably we need to know more rather than less about our multiple unit banking system and how deposit banking and bank reserves react to regulatory measures.

The third confusion that I find in Mr. Shaw's approach is the implication for controls in shifting from monetary theory to general debt theory. Mr. Shaw stresses the need for systematic reconstruction of monetary theory in the general context of debt theory "as a more conclusive way of explaining why monetary techniques and policies succeed [or fail]." And he also emphasizes that nonbanking agencies, private and public, are so important in transmitting monetary policies that they should be given special consideration in the determination of policy.

Does the aggregate debt approach imply a wider application of regulatory measures? I might note, in passing, that in Federal Reserve literature the word control is fast being replaced by the word regulation; the latter word seems more apt for indicating the influence of a policy measure on a tendency in the economy.

Present general monetary measures—discounts, open market operations, and changes in reserve requirements—apply to commercial banks. They do their work through their effect on the reserves of commercial banks. The impact spreads from banks throughout the economy, depending on the operation of the commercial banks under our so-called "private enterprise system." Selective regulation has been applied permanently to only one area—stock market credit, with governmental action and administration reaching the agencies providing such credit; that is, brokers and dealers as well as banks.

Does Mr. Shaw intend that the regulatory techniques be applied to debt obligations other than monetary debt and to the related sectors of the economy? To put the question more specifically, should Mr. O'Leary's discussion of the insurance companies and their dominant influence in the capital market

be topped off with consideration of a regulatory technique, directed toward preventing the operations of this group of financial institutions from exerting an unstabilizing influence on the economy?

BURTON C. HALLOWELL: Both Mr. Morton's and Mr. O'Leary's papers deal with the capital market—the market for long-term funds. Both papers also deal with certain—but different—consequences stemming from the institutionalizing of savings.

Mr. Morton concludes that the market does not accurately reflect the risks inherent in the securities traded. Specifically, he finds a tendency in our economy toward an overvaluation of high-grade fixed income security prices and an undervaluation of the more speculative securities, including equities. The investor, it seems, fails to equalize returns at the margin in markets of different risks. There is insufficient mobility of long-term funds away from high-grade fixed income securities and into the more speculative securities.

Mr. Morton has covered very thoroughly the various factors contributing to this relative immobility, and I have only two minor additions. One concerns the reasons why institutional investors do not move into the equities market with more vigor, even when returns from their traditional investments are relatively low. There is always some pressure under these conditions to reach out for earnings in unorthodox directions. One deterrent to this movement, however, is the institutional investor's judgment as to where the weight of criticism will rest. On the one hand, he will face criticism for failure to earn an adequate return. On the other, he will face criticism if there is loss of dollar principal. By and large, the fear of the repercussions resulting from any loss of dollar principal will always carry the most weight.

Another point concerns the effect on individual investors of the progressive personal income tax rates. These investors are presumably the ones who should be expected to provide the greatest mobility of funds between markets of different risk. However, if a differential of 2 percentage points is sufficient to cover a risk, the individual investor in the 75 per cent tax bracket would require 8 percentage points before taxes to secure the 2 points after taxes. The market may not provide this, and the mobility of these funds may suffer.

Before leaving the question of mobility between markets, it should be noted that Mr. O'Leary in his paper implies somewhat greater mobility of life insurance funds among "types of outlets" than Mr. Morton's analysis reveals.

I should also like to offer an amendment to Mr. Morton's analysis of the effects of unduly cheap high-grade debt money on the over-all cost of money to utilities and to manufacturing corporations. As for public utilities, he feels there has been a tendency for the ratepayer rather than the stockholder to benefit. Insofar as regulatory bodies set fair rates of return in light of the total investment in the utility, I believe this is true. In the case of industrial concerns, however, he feels that a low price paid for debt has meant greater earnings on the equity. While this may have been so in general in the post-

war sellers' market, I see no reason why it necessarily should be true where competition is keen. In such cases the consumer also may benefit.

Mr. Morton makes a strong case for the existence of unduly low interest rates on high-grade securities. Yet one finds it difficult to be thoroughly convinced in these matters. What really are the risks inherent in various securities? Surely, it is a matter of judgment until it is too late to matter. The opinion of the market that alternative debt ratios up to 40 or 50 per cent for electric utilities require little or no differentiation for risk may, of course, be warranted with the relatively high earning stability of this industry. Lack of linearity—the standard used by Mr. Morton—may be a poor test of failure of the market to reward properly the inherent risks and may provide no reliable evidence of the failure of investors to equalize returns at the margin in markets of different risk. In fact, further study may reveal that no standard will prove satisfactory.

Mr. O'Leary in his paper explores other facets of the institutionalizing of savings: the implications for interest rate theory and, to some extent, for monetary policy.

Mr. O'Leary feels that life insurance companies as a whole do not alter the pace of their lending in response to changing expectations concerning the future of security prices. Life companies do not speculate with respect to future interest rates. They tend to keep fully invested. He feels this is probably true for other institutional investors.

As a consequence, he finds that the liquidity preference theory, which focused attention on the speculative motive, "is inadequate to explain the determination of interest rates" in the present American capital market. He himself prefers the loanable funds approach. May I offer a quotation which I believe covers—or almost covers—Mr. O'Leary's position with respect to the liquidity preference theory: "Thus the rate of interest is what it is because it is expected to become other than it is; if it is not expected to become other than it is, there is nothing left to tell us why it is what it is. The organ which secretes it has been amputated, and yet it somehow still exists—a grin without a cat." You will, of course, recognize these as the words of D. H. Robertson. In view of the fact that life companies seem to spend a lot of time guessing future interest rates, even though they fail to utilize their guesses, we might add that while the life companies expect it to become other than it is, they do not see fit to make these expectations an explanation of why it is what it is.

There are two questions involved here: (1) how much influence does uncertainty concerning future security prices have on long-term interest rates; and (2) what are the implications of this influence—or absence of influence—for alternative interest rate theories.

As for the first question. With respect to life company investments, I agree with most that Mr. O'Leary has said, but I am not sure that these expectations are always an insignificant factor in the market. I have never been convinced fully by the explanation given of the rise in liquidity of life companies during the fall and winter of 1950-51. Large residential mortgage

commitments were made by lenders in the late summer and early fall of 1950 to "beat the gun" of Regulation X. Then cash and short-term governments increased about 800 million dollars in the portfolios of life companies. But why did these commitments lead to such an extent to the sale of long-term governments and the build-up of liquidity? Why did the companies not count on future sales of long-term governments to cover commitments? Federal policy had made long-terms the equivalent of demand obligations for nearly ten years. Could it not have been the increased uncertainty as to the continuation of par support for long-terms? This uncertainty started as early as August 18, 1950, when the Treasury and Federal Reserve issued statements indicating sharp disagreement as to proper policy, and certainly had grown to great proportions by March, 1951. While the selling of long-terms might have been less at this time without the mortgage commitments, I suspect it would have been considerably less without the uncertainty.

My second reason for reserving judgment as to the importance of interest rate expectations is that those corners of the investing community outside the life insurance companies have not yet been sufficiently explored in this respect. I am not so sure but that we might find that savings banks trade securities to a greater extent than life companies and that new information travels rather rapidly among them, so that their actions sometimes take on a mass movement. Furthermore, the role of expectations in the operations of commercial banks in moving between intermediate and long-term securities on the one hand and short-terms on the other requires study. Federal taxation of institutions may encourage sales to establish tax losses and the decision to reinvest in shorter or longer securities than the securities sold may be influenced by expectations.

The capital market may not require the actions of but a relatively few marginal investors operating on the basis of expectations to affect its short-run complexion. In short, most of the investing community might be immune to uncertainty of security prices as an investment factor but the market, by its apparent nature, may reflect in the short run the actions of those who are influenced by expectations.

Turning now to the second question. What are the implications for theory of de-emphasizing expectations concerning future security prices as a market factor—if such should be the case? This I believe should be one but not the sole basis for selecting as between the liquidity preference approach and the loanable funds approach to the short-run determination of the interest rate. Some no doubt have discarded the liquidity preference theory already on the ground that it does not fit the language and thinking of the market place. But later versions of Keynes's approach seem to indicate that the liquidity preference framework can be used to show the impact of other factors besides expectations concerning security prices, while the loanable funds approach can take expectations into account. If uncertainty concerning security prices is to be de-emphasized, it must be done in both approaches.

My earlier reservations concerning the extent to which we must de-emphasize expectations make it difficult for me to rule out the possibility that the urge to get liquid may not in some circumstances place a floor on

the interest rate above the costs of investment in spite of the monetary authorities.

I am somewhat influenced here by what appears to have been the experience in London in 1946-47, although this episode has not been studied thoroughly. In 1946-47, when the British authorities—especially Chancellor Hugh Dalton—sought an arbitrarily low rate of interest—2.5 per cent—they were unable to convince the investing community that they could or would maintain the low rate, the preference for cash over securities was strengthened, and the authorities under these circumstances found it expedient to retreat from their publicly announced objective. This occurred when inflationary pressures were acute, when the government was operating at a deficit, and when speculation was encouraged by special tax conditions. Under other economic conditions (for example, depression), other tax arrangements, and another, bolder (if possible) Chancellor, there might have been no minimum rate.

Finally, I have one observation concerning Mr. O'Leary's concluding remarks about the difficulty of selling government securities when there are ample outlets in corporates and mortgages. The Treasury does find it difficult to capture long-term funds under these conditions, because an increase in the yields on governments raises the entire structure of rates. While it is a difficult operation, however, it is not impossible. The government can always outbid the private borrowers if it wishes. The real difficulty here is not lack of capacity to compete, but lack of willingness in view of the interest cost it may take to do the trick.

# THE ROLE OF CORPORATE TAXATION IN THE AMERICAN ECONOMY

## THE CORPORATION AND THE CORPORATE INCOME TAX IN THE AMERICAN ECONOMY

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Like many other good things in life, the corporate tax came into being by error and deception. When in 1909 a group of liberals of that day demanded a progressive income tax, its adoption was blocked by supposed lack of constitutional authority. As the nearest substitute Congress adopted a corporate profits tax under the name of a "corporate excise tax on the privilege of doing business." That tax was levied at 1 per cent of corporate profits; its contribution to federal revenue was a modest one.

At that time, even the most imaginative tax student did not dream that this newly invented tax would become, within a few decades, one of the main revenue producers, especially during emergency periods.

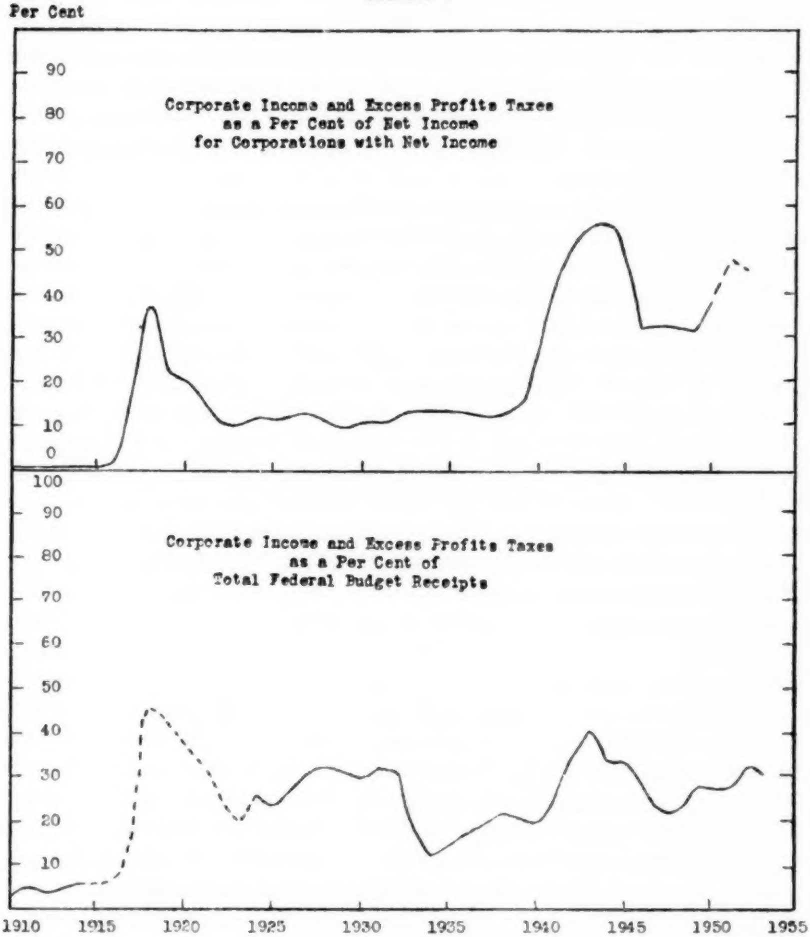
Three times within a lifetime the corporate income tax, reinforced by an excess profits tax, became a major source of war finance. In each war period it contributed roughly one-third of total budget receipts. (See Chart I, lower panel.) After World War I and II, corporate tax rates were reduced but each time remained higher than before the war. (See Chart I, upper panel.)

Economists and tax philosophers, looking at this spectacular giant among tax sources, wondered with what kind of animal they were dealing. Like the boy who, for the first time, sees a giraffe, some economists exclaimed: "There ain't no such animal." They felt that its creation was an error and there really should not be such a tax. Thus I realize that I have a tough job when I undertake to demonstrate that the corporate tax has a place in the American tax system.

### *What Is the Corporate Income Tax?*

Economists are puzzled because the corporate tax does not quite fit into the conventional classification of taxes. We have been accustomed to thinking of a dichotomy between direct taxes on individuals, represented mainly by individual income, property, and estate taxes, and indirect taxes on merchandise, represented mainly by specific excise taxes. The corporate tax fits into neither of these categories.

CHART I




SOURCE: Treasury Department. Dotted lines show author's estimates for years for which comparable Treasury statistics are not available.

Many students of public finance regard a corporate income tax mainly as a tax on individual stockholders. A few praise the tax because most of the dividends are received by individuals in the upper income brackets so that the tax is in effect progressive; more condemn it because it is "double" taxation of the stockholders. On the other hand, there are many businessmen who believe that the corporate income tax is just another cost factor and that its effect is not much different from that of a sales tax. It is probably true that the majority both of econ-

omists and businessmen, each for different reasons, believe that in principle there should be no tax on corporations per se.[1] They think either that the corporate tax should be integrated with the individual income tax or that it should be replaced by a tax on gross business receipts or some other kind of sales tax. Some of the most severe critics of the corporate tax do admit the justification of a corporate franchise tax of moderate rates.[2]

If one regards the corporation merely as an instrument or agent of the stockholders, then only the individuals who own the corporation are real and can be taxed. It then follows that the corporate income tax is, by definition, a tax on the owners of corporations; that is, the stockholders. However, it seems to me more realistic to conceive of corporate enterprises as social and economic entities with their own character and pattern of behavior.[3] The relationship between the corporation and most individual stockholders is in the case of the public corporation only an indirect and ephemeral one. A few owners of concentrated stockholdings exert, as members of the board of directors, a direct influence on management; stockholding for most individuals, however, is just another form of investment. The corporation's financial independence is demonstrated by the fact that about two-thirds of corporate funds are derived from internal sources, undistributed profits, and depreciation and depletion reserves. Furthermore, not all stock is owned directly by individuals. Corporations own stocks of other corporations and often form complex networks of affiliation. Investment trusts, insurance companies, universities, hospitals, and many other institutions hold stocks.

Walter Rathenau, forty years ago, spoke of the trend toward the "autonomous corporation." He envisaged groups of corporations owning each other with management becoming the determining factor. Berle and Means, twenty years ago, described in detail the structure and life of the modern corporation in which management and ownership are largely separated. These were simplifying exaggerations. Nevertheless, we may say that the corporation is a case where the whole is something

[1] A remarkable exception to this point of view is found in Richard Goode's monograph, *The Corporation Income Tax*, 1951.

[2] See Beardsley Ruml and H. Christian Sonne, *Fiscal and Monetary Policy* (National Planning Association, Planning Pamphlet No. 35, 1944). Also, Business Committee, *Report on Corporate Income Taxes* (National Planning Association, September, 1944).

[3] What do we mean when we say that the corporation is an economic and social entity? We mean that the corporation as such (like other social institutions) has a tradition, a reputation, a place in the economic process and in the community. The individuals who participate in the decisions of the corporation consider themselves to be acting "in behalf of" the corporation. At the same time that they are shaping the corporation, they are influenced by the fact that they represent the corporation or work for it. It is said that individuals run the corporation, but it can also be said that the corporation runs individuals. The corporation may well survive many changes of owners and management personnel. The corporation changes, too, but its changes do not necessarily reflect the turnover of individuals who are in charge.

different from the sum of its parts—directors, managers, workers, and stockholders as individuals. This is particularly true of the public corporation; less true of the privately-held corporation.

The corporate tax is a tax on corporate enterprise and not a supplemental individual income tax in disguise. The corporate income tax will be viewed in this paper as a tax on enterprise, which is a kind of tax different from taxes on individuals or on specific merchandise.

Recognizing that the corporate tax is a tax on enterprise does not mean that the tax does not affect individuals. A tax on tobacco is a tax on consumption; obviously it affects those individuals who smoke. An excise tax involves double taxation in the sense that the same individual may be hit once by an individual income tax and once as a consumer of a taxable product. In the same way, a tax on enterprise affects individuals, who are also taxed by several other taxes. There will always remain double or multiple taxation as long as we do not adopt a single tax system.

### *Who Pays the Corporate Tax?*

The corporate tax then, in my opinion, is a tax on corporate enterprise. But how does the corporation respond if corporate taxes are either increased or reduced? Does an increase in corporate taxation result in lower dividends, curtailment of retained earnings, lower wages, or higher prices?

For individual income taxes and for excise taxes on specific commodities, there is at least a reasonable presumption concerning the immediate economic effects of a change in taxes. However, for taxes on enterprises per se, the effect depends on the steepness and suddenness of the rate change, on whether there is a simultaneous change in government spending, on monetary policies, on wage and price policies, and on other factors. Also, there may be a difference between the immediate and longer range effects of a tax change.

Classical theory had a simple answer. The costs of marginal production determinine the competitive price. There is no profit, and therefore no tax, on marginal production. Hence, the tax cannot enter into determination of the price. The tax is paid exclusively out of the profits made in lower-than-marginal cost production. Similarly, in classical economics, wages are not influenced by profit and therefore cannot be influenced by profit taxation. In our world, which has little resemblance to the world of classical economics, we recognize that prices determined by the individual entrepreneur and wages determined by collective bargaining are affected, among other factors, by profits and profit expectations.

I believe it is impossible to obtain a satisfactory answer through the

usual analysis of shifting and incidence. The usual analysis proceeds on the *ceteris paribus* assumption; that is, on the assumption that a specific tax measure is adopted but that nothing else changes. However, taxes will not be raised except when government expenditures rise, too, or when the tax takes the place of borrowing or of another tax. Thus a meaningful analysis of an increase in corporate taxes should take into consideration, also, the effect of an increase in expenditures or a reduction in other methods of financing.

*Increase in Corporate Taxes.* In search of some factual evidence, we may take a look at the effect of corporate tax increases during the second World War. At that time the average effective tax rate on corporate profits, including the excess profits tax (for corporations with net income) reached 55 per cent compared with 14 per cent before the war. (See Chart I, upper panel.) During this period the profit ratio before taxes rose and the after-tax ratio declined in about the same proportion (ratios of net income, before and after taxes, to "gross compiled receipts"). The after-tax ratio declined from 7.2 per cent in 1939 to 4.8 per cent in 1944. (See Chart II.) This suggests that during the war at least a large part of the increase in corporate taxes was not passed on in prices but in reduced after-tax profits.

This observation cannot be generalized, since during the war there were direct controls which limited price rises. There was also the fact that investments in new construction and equipment were limited by direct controls. This limited the inflationary pressure, facilitated price control, and again made it harder for business to pass on corporate taxes.

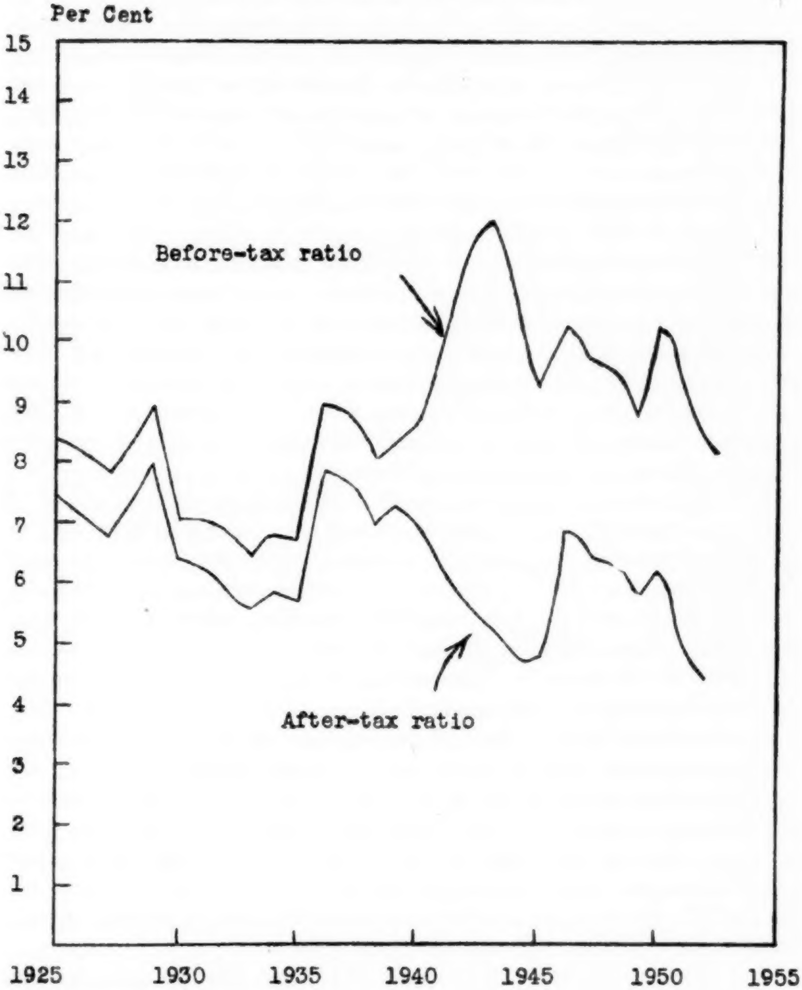
Besides curtailing profits, the corporate tax increase during the war helped to make wage controls workable. It is simply a fact of life that the wage control of World War II would not have been possible without the simultaneous adoption of very drastic corporate profit taxation. It would not have been possible to persuade wage-earners to limit their demands for wage increases if there had not been at the same time a definite limit on the profits that the corporations were permitted to retain.

Thus I conclude that the increase in corporate taxes during the war was, for the most part, not passed on, and that it actually helped to control inflation, working in conjunction with other taxes and direct controls of prices, wages, and investment.

If corporate taxes are increased to finance an additional government program without the simultaneous imposition of a broad program of direct controls, the effect might be quite different. An additional government program adopted under conditions of full employment would cause a price rise unless private demand should be curtailed. It is not

CHART II

RATIOS OF NET INCOME, BEFORE AND AFTER TAXES, TO GROSS COMPILED RECEIPTS
(For Corporations with Net Income)




SOURCE: Bureau of Internal Revenue.

likely that such a price rise would be prevented by an increase in corporate taxation. The increase in corporate taxes would not curtail consumer demand. It would reduce corporate funds only as compared with what they would have been without the tax rise. Corporations—particularly larger corporations—could find ways to finance investments.

In case of very high tax rates, business might even extend some activities which can be charged as current expenses. This would tend to offset what curtailing effect the corporate tax might have.

If an additional government program is adopted without curtailment in private demand, a price rise may ensue. Profits before taxes may go up and corporate funds available for distribution or investment would be restored. The result would be that the tax has been shifted. I believe, however, that this result will take place only when the sum of private and public demand exceeds available and forthcoming resources, when there is no comprehensive anti-inflation program, and when tax rates are raised so high that the stimulating effects offset what curtailing effects the tax may have. It is difficult to prove statistically that this actually happened in the United States in recent years. Nevertheless, it is remarkable that in 1953, in spite of the very high tax rates, profits after taxes were three times as high as those of 1939. If corporate taxes were borne fully by corporate profits, it would not be easy to explain why in recent years profits after taxes, and also investments, have been higher than ever before. I conclude from this that part of the high corporate taxes has entered the price structure.

It is immaterial whether this result is called "shifting" or "effect" of the corporate tax.[4] Even if corporate taxes are assumed to be treated as a cost by corporate managements, it must be remembered that the price level is determined both by demand and by cost factors. If prices rise as a result of an increase in government spending which is financed by additional corporate taxes, it may be said that the price rise is due primarily to the increase in spending. It can be said, also, that the increase in taxes has not prevented the price rise; probably it has supported the price rise. Nevertheless, the shifting of the tax would not be likely to occur without the increase in active demand.

If the corporate tax should be increased moderately when government expenditures also increase only moderately, the result would probably be quite different. Especially if the additional tax is imposed at a time when business' desire to expand is not very active, a price rise may not be possible. Under such conditions it would be more likely that the tax would result in a curtailment of corporate funds.

In summary, the effect of a large increase in corporate taxes for war finance depends largely on the way in which this measure is made part

[4] I think a more meaningful distinction in tax analysis is between the effect of tax changes (and the related changes in expenditures or other methods of financing) on the flow of funds and on demand and costs, on the one hand, and the effects on the intentions, motivations, and behavior of business managers, capitalists, workers, and consumers, on the other hand. Certain features of corporate taxation, such as carry-forward or carry-back provisions, have during periods of favorable business conditions only a relatively small effect on actual collections and therefore on changes in the flow of funds but may have a great effect on business motivation.

of a comprehensive program of anti-inflationary controls. The effect of a more moderate increase in corporate taxes depends largely on the size of the simultaneous increase in government spending and on the vigor of business investments.

If this analysis is correct, the tax has a sort of built-in safety valve. When it reaches a rate which could impair an otherwise vigorous economic expansion, it may change its character. If the force of economic expansion is strong, prices and profits may rise, so that funds are restored for financing the expansion.

*Reduction in Corporate Taxes.* In regard to reduction of corporate tax rates—in case of a decline in government expenditures—again the effects are likely to differ with varying economic conditions. When both tax rates and controls were relaxed after World War II, after-tax profits quickly rose. However, it is probable that wage-earners also gained from the corporate tax reduction in that corporate management, experiencing such a rise in profits, put up relatively feeble resistance to wage demands.

In another climate—for instance, in a buyer's market when slack is developing in the economy (a condition which many economists expect to occur with the tapering off of the present defense program)—there is the possibility that a corporate tax reduction might facilitate price reductions or that it might make some wage increases possible in spite of a weakness in the market.

If a tax reduction should be designed primarily to strengthen mass purchasing power, a reduction in individual income or excise taxes would undoubtedly be more effective than a reduction in corporate taxes. If, however, a corporate tax reduction is desired for the main purpose of strengthening management incentives, there could also be, as a desirable by-product, some favorable effect on mass purchasing power.

I cannot deal here with all aspects of the incidence and effects of corporate taxes in the short and longer run. I have not analyzed the differential effect the corporate tax may have on different types of enterprises. What I have been saying has already been sufficiently complex. Perhaps I could state what I have to say in even simpler terms: the effects of corporate taxes, as the effects of all general taxes on enterprise, depend on the circumstances.

### *What Justification of Corporate Taxation?*

As I said, probably the majority of economists believe that there is really no justification for corporate taxation. They urge us to move away from the corporate tax as fast as practicable; that is, as fast as government expenditures decline or a substitute source of financing can be found.

In this section of the paper I shall deal with the various criteria for the appraisal of taxation, discussing to what extent on the basis of these principles the corporate tax can be vindicated or should be indicted.

*The "Cynical" Rule of Taxation.* While economists and tax philosophers have been puzzled, the tax collector has learned to appreciate the corporate tax as a source which not only gives very high yields but which also permits collection at relatively low costs. In the fiscal year 1947—the only year for which we have such a comparison—the Bureau of Internal Revenue collected from corporate taxation 25 per cent (in fiscal year 1953, 31 per cent) of total gross tax receipts but used only 10 per cent of its man-hours on the collection of those taxes.

As a side remark, it should be mentioned that a corporate tax is almost ideal from the point of view of the politician. There is no other tax which brings in so much money while making so few voters mad.

The fact that the corporate tax is relatively easy to collect and meets with less political resistance than most other taxes is in itself regarded as undesirable by those writers on tax and fiscal policy who believe that government programs and expenditures are evil and that their growth can be restrained only by the resistance of taxpayers. This opinion would lead to the conclusion that the most painful taxes are most likely to do the best job. If one believes, however, that a minimum of government is not necessarily the optimum, then it is an advantage if a tax involves relatively low costs of collection and low resistance on the part of the people. One gives up or drastically reduces a tax source which has these merits only if there are strong reasons against the tax on grounds of fairness, or strong evidence that it is damaging on economic grounds, or if there is a good candidate to take its place.

*The Criterion of Fairness.* I do not regard the ability-to-pay principle as the main justification of a corporate tax; nor do I believe in the validity of objections made against the tax on the ground that it violates the ability-to-pay principle. At any rate, I do not believe that the fairness of our tax system as a whole would be improved by substituting another tax for the corporate tax as a revenue source. It is likely that corporate taxes have at least in part entered into the price and cost structure of the economy and also that they are reflected in the market valuation of stocks. It would be impossible to say today whose income has been affected by corporate taxes and who would benefit from their abolishment.

In the modern economy the government has become so involved in many aspects of the economic process and is forced to raise such large amounts of revenue that it would not be feasible to impose only taxes which are based on observance of the ability-to-pay principle in its strictest definition.

One might possibly justify corporate taxes through reference to the benefit principle of taxation. Enterprises do enjoy many advantages which are provided by society in general and governments specifically. Production today could not be carried on without the skilled workers, engineers, and scientists who are educated in part at the expense of of the general taxpayer. Without the legal arrangements of the centralized capital market, it would not be possible for corporations to obtain funds at costs which are relatively low compared with the costs of eliciting funds from local sources. These are just a few of the ways in which corporations benefit from the social environment in which they operate. We may add to these the government's pledge in the Employment Act of 1946 that it will endeavor to promote conditions of continuing expansion and economic stability. The fact that the government is committed to a policy of stabilization has substantially improved the longer run outlook for business profits and generally reduced the risk that business may suffer severe losses during depressions.

Nevertheless, I prefer to limit application of the benefit principle to cases in which there is a direct correspondence between a specific tax and a specific government service, as, for instance, in the case of automobile or gasoline taxes and the construction and maintenance of roads. Also, I believe that government contributions to the productive process, even if they were measurable, should not necessarily be used to determine the right amount of corporate taxes.

I think there is a broader principle of tax justification involved which, for want of a better name, has been called the "partnership" principle. This term is, however, subject to possible misinterpretation. As commonly understood, a partner has the right both to participate in the yield and in the management of an enterprise. But what those who refer to this tax principle have in mind is that the government is a sort of silent, nonvoting partner who shares in the profits and to some extent in the losses of enterprise.

This might be only a somewhat sophisticated expression of our cynical rule of taxation according to which the government takes money where it can be found, with the least effort and with the least resistance on the part of taxpayers. But the principle also implies a limitation. No partner—nonvoting or otherwise—who knows his self-interest would take out of an enterprise amounts which would make it impossible to give adequate remuneration to the active participants in production or which would make it impossible for the latter to conduct the business in an effective manner.

It is difficult to see why the government should be justified in taxing incomes received by individuals but not in taxing the yield of production before it has been distributed to the individual agents of production.

The individual income tax grew out of the idea that the monetary counterpart of the product is distributed and that the government should tax these individual incomes progressively according to ability to pay. This permits some correction in the income distribution as it results from forces of the market, inheritance, and regressive excise taxes.

Not as a substitute but as a supplement, there is need and justification for taxes which give the government a share of income right at the source. It is hard to see why the total income from production should first be distributed and then taxed and why some part of the yield should not be taxed before it is distributed to individuals. I cannot see why such a tax should be incompatible with the working of our economic system.

There is, however, a serious objection to this interpretation of the corporate tax which we have to consider. Why should a tax on enterprise be levied in the form of a tax on profits? Why should the government take a share only out of profitable operations and not out of nonprofitable operations? Why should profits rather than total yield ("value added") be the basis for such a tax at the source?

It is true that both profitable and nonprofitable operations benefit from government services. A benefit tax in the narrower definition is usually paid by both profitable and nonprofitable enterprises; trucks and buses pay a tax for the use of public roads irrespective of whether they operate at a profit or a loss.

A tax on enterprise per se could be based on any criterion of the business operation. Actually, we have taxes on sales, pay rolls, business property, and other criteria. Some of these taxes are imposed by state and local governments; others by the federal government. Particularly for state and local governments, a case can be made for a tax on enterprise on a very broad base. In this connection, the recently adopted tax on value-added in the state of Michigan is very interesting. Only if we had one single tax on enterprise for federal, state, and local governments would a value-added tax be a logically superior choice.

For the federal government a tax based on profits has decided advantages. A tax on business profits is much more flexible than a tax on a broader base, such as gross receipts or value-added. It does not add an additional fixed cost to doing business. Also, a corporate tax which allows for adequate carry-back and carryover of losses does not substantially modify the chances and risks involved in a business venture, since the government participates in both gains and losses. For these reasons I feel that, from the point of view of tax philosophy, there is justification for using profits as a basis for a federal tax on corporate enterprise.

*The Economic Criterion.* Basically, taxes are designed to enable the government to utilize resources which are needed for the execution of government programs. If the government wants to purchase 5 billion dollars' worth of munitions, taxation can aid in curtailing demand for producer or consumer goods so that materials, facilities, and labor will become available for meeting the government demand. The same is the case when the government does not want to use resources itself but wants to transfer resources from one group of the population to another group. If the government decides to give 1 billion dollars to veterans or social security beneficiaries, a tax will aid if it reduces the spending of other consumers by 1 billion so that the goods that the beneficiaries want to buy will become available without a price rise.

In terms of this basic economic criterion, the corporate tax is probably less effective than other taxes. However, these examples assumed full employment of a given amount of resources. Under conditions of growing resources or some slack in the use of resources, the government may adopt additional programs (e.g., the World War II or Korean defense programs) without necessarily reducing the private use of resources. In such a situation, it is not essential that the tax curtail private demand; it serves a function if it limits the rise in incomes and private demand. This the corporate tax may do.

There is another necessary qualification. We have spoken of the effect of one tax—the corporate tax. Before drawing conclusions we should analyze the effect, not of one tax, but of the tax system as a whole. Even if the corporate tax it not directly effective in curtailing or limiting private demand, it may do so indirectly. An increase in corporate taxes may make increases in the individual income tax in the lower and middle brackets more acceptable. Thereby it may indirectly contribute to a needed curtailment or limitation of demand.

Even assuming that the corporate tax would not substantially aid in redirecting resources from private to public use, it may still fulfill a useful function. If the tax does not curtail or limit effective demand, its immediate effect would not be very different from that of financing the same program by inflationary borrowing. With respect to the longer run, however, there still remains the difference for the federal budget and debt management between financing a program by borrowing and by taxation.

Our defense of the corporate tax, therefore, is not based predominantly on the ground that it is a very effective means of directly rechanneling resources. But we have to examine whether the tax is objectionable on economic grounds.

*Objections on Economic Grounds.* The main points in the economic bill of particulars against the corporate tax are that it discourages in-

vestment, encourages waste in corporate management, and promotes debt financing while discriminating against equity financing.

Enterprise is the engine that provides the motion of the economic system. Careful consideration should therefore be given to the claim that the corporate tax tends to stall or distort the operation of this all-important engine.

I have said already why I believe, on the basis of theoretical argument and observation in recent years, that high corporate taxes do not necessarily discourage investment when business is intent on modernization or expansion. Moreover, when individual income taxes are high, and particularly when capital gains are taxed at a lower rate, there is a strong incentive to retain earnings in the corporation and a premium is placed on investment in "growth" corporations. Thus the curtailment of funds by the corporate tax is at least in part, if not more than, offset by the effect of other taxes. The tax system as a whole has probably not been unfavorable to corporate development.

There are more facts which bear out the indictment that a corporate tax with very high marginal rates invites extravagance in business management or, more cautiously stated, encourages expenditures which would not have been made with lower taxes. High corporate taxes and high individual income taxes have induced many corporations to grant their executives benefits which are charged as business expenses of the corporation but which are not taxed as income of the executives. It is also true that very high marginal rates induce liberal spending by business in advertising, in good will campaigns, and in "investment" in the beautification of factories. Many corporate activities stimulated by high taxes—particularly expenses for research and development and contributions for philanthropic causes—are very desirable. However, some of these activities which use scarce resources are of doubtful value in a period of inflation. Therefore, as part of anti-inflation policy, high corporate taxes require strict disallowance by the tax authorities of "unreasonable" expenses; otherwise, the anti-inflationary effect of high taxes is at least in part offset. That high marginal rates promote wasteful spending was a forceful argument against the continuation of an excess profits tax at the end of both world wars when direct controls of materials no longer limited business activities. It is much less an argument against a corporate tax with a proportional and more moderate rate.

We often hear the argument that a corporate tax promotes debt financing and penalizes equity financing. This argument is entirely logical. However, there are only a few cases in which corporations engaged in borrowing instead of equity financing clearly because of tax considerations. It seems that the method of financing is determined

primarily by the kind of securities which find a market. Nevertheless, thought should be given to modifications in corporate taxation which would approximately neutralize the effect of taxes on the methods of financing.

Thus, looking at the economic bill of particulars, I find no convincing reason why this tax source should be abandoned or drastically reduced as long as moderate rates are used. What rates should be regarded as moderate cannot be determined with any precision. It depends in part on the relationship between rates and rate structure of the individual income tax and the corporate tax, respectively. Even though I can only give an opinion without proof, I venture my personal impression that a corporate tax is harmful if its rates exceed 50 per cent except in an emergency when wartime controls are simultaneously adopted. I admit that fifteen years ago I would have put that limit at a lower figure.

While I feel that a corporate tax of moderate rates has a definite and significant place in the federal tax system, some important problems remain unsolved. In the last section of this paper I will discuss what appear to me as the three most important of these problems.

### *Three Unresolved Problems in Corporate Taxation*

The three most difficult interrelated questions with respect to the corporate tax seem to me the following:

1. The line of demarcation between enterprises which operate in corporate form and enterprises which operate as individual firms or partnerships is entirely arbitrary. The more significant distinction is between what may be called the public corporation, on the one hand, and the privately-held corporation and the unincorporated firm, on the other hand. Can tax law define and recognize this distinction?

2. High individual income tax rates give a considerable incentive for retainment of profits by corporations. The present provision for a tax on "corporations improperly accumulating surplus" (Section 102 of the Revenue Code) is criticized by some as undesirable, by others as ineffective for dealing with this problem.

3. One of the main problems of economic stabilization at high and expanding levels of activity consists in reducing fluctuations in business investments. What contribution can corporate tax policy make toward the regularization of business investment?

With respect to each of these three problems I shall make a few remarks without claiming that I know the solution for any one of them.

*Corporate and Unincorporated Enterprises; Public and Private Corporations.* In exploring the first problem, we ask what justification there is for a different tax treatment of corporations and unincorporated enterprises. Profits of the individual firm or partnership are taxed by

the individual income tax. The individual income tax does not make any distinction between the profits the individual withdraws from his unincorporated enterprise and the profits which stay in the enterprise. As far as individual entrepreneurs and partners are concerned, a part of the individual income tax could be interpreted as a tax on the enterprise. Individual enterprises and partnerships have no problem of double taxation but they have a very serious problem in that business profits are taxed in accordance with rates for the income bracket in which the owners happen to be. By the use of the corporate form, they are able to have the undistributed profits taxed at the rate of the corporate tax which often is lower than the marginal rate of the individual income tax paid by the owners of the enterprise.

By far the largest number of corporations are in the nature of their business much more similar to unincorporated enterprises than to the relatively small number of what we may call public corporations. Does it make sense that a corner grocery store is in the same category as U.S. Steel or General Motors as far as legal form of organization and taxation are concerned?

How would it be possible to make a distinction between what we may call the private corporation and the public corporation? In some countries there is a distinction based on whether the owners have no liability or limited liability for the debts of the corporation. Other countries make a distinction according to the number of owners. Years ago a proposal[5] was made to establish two different types of corporate charters in the United States: one for private corporations and one for public corporations (the distinction being made in accordance with the method of financing the corporation elects to use).

Private corporations would have all the tradional rights of the corporation except that their stocks or obligations could not be traded at the stock exchanges nor bought by financial institutions, except those specifically certified as institutions for small business financing. On the other hand, public corporations would have access to the public capital market, including the privilege of trading their securities at the various stock exchanges and of selling securities to all kinds of financial institutions.

The public corporation, so defined, would be taxed by the corporate tax, while privately-held corporations could elect to be taxed either as corporations or as partnerships; i.e., the partners could include in their individual incomes their shares in profits, distributed or undistributed. In the latter case the penalty tax of Section 102 would not bc needed.

This proposal would remove the so-called "double taxation" for those

[5] See Final Report of the Committee of the National Tax Association on Federal Taxation of Corporations, *Proceedings of the Annual Conference on Taxation*, San Francisco, California, September, 1939, especially page 559.

corporations in which management and ownership are typically one, or are intimately related, and in which ownership does not change hands frequently. These are the corporations where there is most substance to the charge of double taxation. Only if these corporations found it more advantageous to pay the corporate income tax would they do so.

It would be desirable if all private corporations could be taxed as partnerships. However, this would not be feasible under the present individual income tax rates, which reach a maximum effective rate of 88 per cent in the highest brackets. As long as we have these very high top rates, I think taxation as partnerships should remain optional for corporations in this category. This means that the penalty tax of Section 102 would have to be continued.

Over the long run, I think it would be desirable to lower the top bracket rates on individual incomes. This could be done by shifting part of the tax burden of high income tax payers from the income tax to a broadened and strengthened estate tax. Such a shift in emphasis would probably also somewhat reduce undesirable effects on work incentives. With lower top bracket rates, the profits of all privately-held corporations could be taxed as individual income. I personally see merits in this proposal but I do not know whether it would be practicable. Still, I recommend it for consideration.

*Retained Profits.* The retained profits of corporations have long been recognized as a major problem of taxation, even by those who do not admit that there is a justification for taxing enterprises per se. The fact that a large proportion of corporate profits does not become individual income and is not subject to the individual income tax appears undesirable to those who regard only the individual owners of the corporation as real taxpayers.

Another group of tax students has been concerned on the economic ground that the tax system grants an incentive for the retention of earnings. These are the economists who fear that, with a rising standard of living, the people's desire to save may at times tend to outrun business' desire to invest, thus creating a recessionary force. Thus, both on equity and economic grounds, many economists during the thirties searched for tax measures which would equalize the burden imposed on distributed and undistributed earnings. (The National Tax Association's committee report on federal corporate taxation, cited above, presents an expression of this view.)

During the last fifteen years the economic concern has moved into the background. The inflationary pressure generated by defense and war spending and very high levels of business investment made undersaving and inflation a more urgent problem than the threat of oversaving and deflation. However, no one can be sure today that the concern with oversaving will not appear again when personal incomes

continue to rise and defense expenditures and defense supporting investments decline.

I have referred to the problem of retained earnings of privately-held corporations. For what we have called the public corporation, there is less likelihood that the corporation will retain earnings exclusively for tax considerations if the stockholdings are widely distributed. We may say, however, that the preferential treatment of undistributed profits and capital gains has made it easier for corporations to retain the earnings which they can profitably use in business expansion. Only if the force of business expansion should begin to slacken may retention of earnings become again a problem of real importance.

If profits earned in periods of high-level activity which are not used for distribution or investment should be earmarked for future productive use in periods of an economic downswing, at least part of the concern on economic grounds would be removed. Therefore, this problem of retained earnings naturally leads to the third problem, which we have identified as the problem of regularizing business investment.

*Regularizing Investments.* Attempts to influence investment have been made by modification of the depreciation allowance: a rapid amortization allowance in the case of defense supporting investments (in the United States) and the deferment of amortization for nondefense investment (in Canada). Sweden has experimented with the idea of building up tax-free investment reserves during periods of high employment for use in periods of economic slack.

I do not think that any tax device will be able to induce business investments at times when business would otherwise be unwilling to invest. However, there seem to be indications that the thinking of business about economic fluctuations is undergoing a change. It appears that investment planning is increasingly oriented toward longer range objectives of business expansion and that confidence is growing that recessions will be effectively counteracted before they develop into deep and long-lasting depressions. If such a psychology should become more prevalent, business may be inclined to take advantage of the lower costs of construction and more ample financing in a period of slack. If an attitude of this kind is growing, it might be possible and advisable to strengthen it by tax incentives.

I believe that it would be possible to devise methods which would make it advantageous for business to earmark profits and depreciation reserves accumulated in periods of high activities for use in periods of economic slack. Within the space of this paper I want only to raise the question whether development of an incentive of this type would be desirable rather than to discuss technical details of such proposals as have been made or could be made.

In any case, it seems to me that adoption of such a countercyclical

device would be preferable to a policy of changing the corporate tax rate in the cycle. Variation of the corporate tax rate per se as an anti-depression measure is probably not very effective. It is also desirable, in the interest of long-term business planning, not to vary the corporate tax rate frequently once it has been set at a rate which appears appropriate for peacetime.

### *Summary*

In summary, the main point I have wanted to make is that, in my judgment, it is an error to regard the corporate tax as a substitute for or supplement to the individual income tax. It is not a tax which is primarily justified by the ability-to-pay principle. It is a tax through which the government partakes in the yield of corporate enterprise. At times, the existence of the tax may reduce what the other partners in production—labor, management, capital—receive as their share. At other times, particularly when rates are very high and additional funds are needed to finance investment, it may result in rising prices or in keeping prices at a higher level than they otherwise would be.

The corporate tax per se should be imposed only on the public corporations which use the opportunitites of the national capital market. Private corporations should be taxed, if possible, like partnerships.

In times of war or mobilization, a case can be made for high rates of corporate taxation, including an excess profits tax. Such a tax, however, is effective only if price, wage, and investment controls are also adopted. It will, in turn, make these controls more effective. High tax rates also make it necessary to have permissible expenses closely scrutinized by the tax authorities.

In normal times the corporate tax rate should be set below 50 per cent. Management should not feel that half or more of any marginal expenses it incurs are borne by the government. What may be regarded as a normal peacetime rate depends, of course, on the total revenue need. The corporate tax rate should be determined in proper relation to other taxes, particularly in relation to the individual income tax rates. A reduction from the present rate to a future normal level should be so timed that it occurs when business is weakening and when the tax reduction would not only strengthen management incentives but also facilitate price declines or wage increases. Once a peacetime level has been reached the corporate tax rate should not be changed too frequently. Other taxes are more suitable for anticyclical rate changes.

In my opinion the corporate tax—if possible an improved version of the present tax—has a definite place in the American system of enterprise and in the federal tax system. At least, it can be said that this tax is a lesser evil than other taxes which have been suggested as possible substitutes.

# TAXATION, INCENTIVES, AND FINANCIAL CAPACITY

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During considerable portions of the last decade, several of us at the Harvard Business School have been engaged in an intensive series of studies on the effects of taxes on business and investor incentives and decisions. The objective of this paper is to take a broad look at these studies and at related research in which we have been engaged, and to try to summarize the over-all findings and generalizations which characterize these studies as a whole.[1] At a broad level of generalization, then, what can be said about the findings of these studies? I shall first simply enumerate these findings in order to give direction and focus to the later discussion. The evidence underlying them will be developed in more detail in the body of the paper.

## I

*Over-all Effect of Taxes.* The first, and most significant, finding is that the empirical evidence of these investigations substantiates none of the extreme charges that are frequently made concerning the harmful effects of taxation on the economy. It is often alleged, for example, that the heavy tax burdens which have been imposed on the American economy for the last ten to fifteen years have destroyed or seriously impaired the basic incentives of individuals to work and their willingness and capacity to save and invest. It is also claimed that taxes have prevented new enterprises from being formed on an adequate scale; that they have made impossible the expansion of existing enterprises; and that they have caused such large numbers of independent businesses

[1] Specifically, this paper is based mainly on the volumes in which I participated as author in the series of studies conducted through the Harvard Business School under a grant from the Merrill Foundation for Advancement of Financial Knowledge and on the data obtained in the study of the *Effects of Federal Taxes on Growing Enterprises,* by John Lintner and me. I wish to acknowledge my indebtedness to my co-authors in these studies, especially Professors Lintner and Lawrence E. Thompson, with whom I have worked most closely. I have also attempted to take full account of the findings of the other four volumes in the Merrill Foundation series, and in addition I have benefited from discussions with Professor Lintner concerning the research which he is currently doing on the subject of profits under a grant from the Rockefeller Foundation. Professors Lintner and Thompson have read this article in manuscript and have made helpful suggestions for its improvement. They are in general agreement with the findings expressed in it. My other colleagues who participated in the Merrill Foundation series have not read the manuscript and should not be regarded as being in any way committed by the views here expressed.

to be sold out or merged with larger companies as to affect significantly the degree of industrial concentration in the country.

While there is some factual foundation to all these charges, the weight of the evidence uncovered in this series of researches tends to minimize rather than to stress their importance. If a general statement has to be made in flat unqualified terms, the striking fact is that, by and large, the tax structure appears to have had only a relatively limited and specialized impact both on the basic incentives which motivate the private economy and on the structure of this economy. The effects of the tax structure on the aggregate levels of employment and real income realized over the last ten to fifteen years have been even more limited, as is obvious from the record levels achieved in both employment and income during this period.

*Restrictions on Financial Capacity Greater Than on Incentives.* To the extent that the tax structure has impaired the performance of the economy, our data point consistently to the conclusion that it has done so much more by restricting the financial capacity of key groups in the economy than by impairing the incentives of these groups. This conclusion holds especially for the effects of taxes on the rate of expansion of business enterprises, particularly of small companies with promising growth prospects. It also applies, though perhaps not to such a pronounced degree, to the effects of taxes on the flow of venture capital from private individuals to business enterprises. Moreover, in other areas where the disincentive effects of taxes have been alleged to be powerful—such as work incentives, the formation of new enterprises, and the sale, merger, or liquidation of established companies—our findings have tended to minimize rather than to stress the over-all impact of taxes.

It should be noted in passing that this emphasis on financial capacity, as contrasted with incentive effects based on income and profit expectancies, has important implications for wide ranges of economic theory. With the exception of aggregative analysis, the traditional theoretical approach has been to emphasize the latter type of effects to the near exclusion of the former. I believe that the failure to allow adequately for cash and liquidity considerations has greatly limited the relevance of much theoretical inquiry.

*Explanations for Moderate Over-all Impact of Taxes.* Several main factors can be cited as explanations of this moderate and comparatively optimistic conclusion concerning the effects of taxation—as compared with the popular generalizations about the highly destructive effects of the existing tax structure. The explanations, in themselves, can properly be regarded as generalized findings of our studies.

*Importance of Nontax Considerations.* By far the most important

explanation for the relatively limited effect of taxes, even on individuals and businesses subject to very high marginal tax rates, is that nontax considerations frequently are of much greater significance than tax considerations in determining the basic decisions both of individuals in their personal capacities and of the managements of business enterprises. I believe it can be stated as a general proposition that the more basic and fundamental the decision and the greater its significance for the effective functioning of the economy, the more likely are nontax considerations to be dominant. So far as incentive effects are concerned, taxes are more likely to determine how a thing is done than they are to determine what or whether an action is taken. The more specific and technical the decision at hand, the more likely are taxes to be controlling.

A good illustration of the above propositions is the effect of taxes on executive activity. On the critical question of how hard executives work—of the intensity of executive effort and activity—the evidence indicates that taxes have had very little effect. In contrast, on the more restricted and less basic question of how executives are compensated, tax considerations have been highly influential.

To cite another example, we have found little evidence to indicate that taxes have greatly affected the desire or willingness of individuals (in the aggregate) to organize new enterprises. Once the decision is made to start such an enterprise, however, the legal form of the enterprise and the nature of its capital structure are likely to be dominated by tax considerations.[2]

As a final example, the conditions under which taxes are likely to be the main motivation for the sale or merger of one company with another are highly specialized and do not apply to the large majority of merger transactions. Once the basic decision to sell or merge is made, however, taxes typically play an important part in the negotiations on the legal form in which the transaction is to be consummated.

*Opportunities for Avoiding Full Impact of High Income Tax Rates.* Another main reason why the tax structure of recent years has had only a moderate impact on incentives—and a much smaller effect on financial capacity than is usually believed—is that the impact of the existing tax structure is frequently less severe than it appears to be at first glance. Popular discussions of the harmful effects of taxes on incentives, and to some extent, also, theoretical economic analyses based on simplified models, often take for granted that all income is subject to the full impact of the personal and corporate income and excess profits taxes.

[2] For a discussion of the effects of taxes on the legal form and financial structure of closely-held companies see Dan Throop Smith, *Effects of Taxation on Corporate Financial Policy* (Harvard Business School, Division of Research, 1952), especially Chaps. VI and VII.

While this assumption is valid in wide ranges of circumstances, there are also numerous opportunities—some of them of strategic importance—for avoiding the full impact of the ordinary income tax rates. The most important of these opportunities, but by no means the only one, is that of accumulating new investable funds and accretions to personal wealth in the form of capital gains rather than of ordinary income.

As is developed in greater detail later in this paper, the continued capacity of individuals in the upper income brackets, as a class, to accumulate large amounts of new investable funds is attributable in considerable part to the fact that many of these individuals are able to make their accumulations in ways that are not subject to the full impact of the top-bracket individual income tax rates. These same opportunities introduce a positive incentive for those top-bracket individuals who by personal disposition are inclined to be venturesome to channel substantial amounts of funds into capital gains situations such as a promising young enterprises. The fact that in many cases these incentives are socially desirable in an economic sense but that at the same time they introduce serious discriminations and inequalities into the tax structure, poses a major dilemma of tax policy.[3]

*High Tax Rates Imposed Under Conditions of Rising Incomes.* A final explanation for the moderate impact of the severe tax burdens of the last ten to fifteen years is that the increased tax burdens have been imposed on an expansionary economy. For many groups in the economy and during most of this period for the economy as a whole, both real and monetary income and profits levels have been rising. As a consequence, for large portions of the economy the heavy tax burdens of recent years have not cut into existing levels of income and profits; their effect has rather been merely to absorb part of the rise in income levels which was occurring along with the tax increases.[4] For the most part, also, the tax increases have been enacted at times when business expectations were buoyant and investor attitudes optimistic.

Full weight must be given to these highly important environmental conditions in appraising the significance of our empirical findings. It would be rash, for example, to generalize from the empirical evidence of the recent past that no concern need be felt about the effect on incentives and economic activity of an indefinite continuance of the current tax structure regardless of shifts in the underling economic conditions (Butters, Thompson, and Bollinger, *op. cit.,* pages 52-75).

[3] This point has been developed in more detail than is possible in this paper in J. Keith Butters, Lawrence E. Thompson, and Lynn L. Bollinger, *Effects of Taxation on Investments by Individuals* (Harvard Business School, Division of Research, 1953), pp. 62-68.

[4] See, for example, the stimulating discussion of this point by Gerhard Colm and Haskell P. Wald, "Some Comments on Tax Burden Comparisons," *National Tax Journal,* March, 1952, pp. 1-14, and Albert C. Neisser, "The Dynamics of Tax Burden Comparisons," *National Tax Journal,* December, 1952, pp. 351-364.

## II

So much for a systematic statement of our major findings or generalizations. I turn now to a more detailed and specific statement of the evidence underlying these findings. Even this "detailed" discussion, however, covers such a broad range of material that it is necessarily at a summary level.

It has seemed best to organize the discussion so as to present a systematic statement of the evidence underlying my first conclusion to the effect that the over-all impact of taxes has not seriously impaired the performance of the economy during the past ten to fifteen years. In terms of the major decisions now confronting the nation in the areas of tax and expenditure policies, this is by all odds the most significant of the above findings. Illustrative material supporting the other main findings, however, will be introduced as seems appropriate at various points in the discussion.

The critical tax effects to be considered in appraising the over-all impact of taxes would seem to be (1) those affecting the basic motivations of individuals as workers and investors and (2) those affecting the crucial phases of business development (namely, the formation of new companies, the rate of expansion of existing companies, and the continued existence as separate competitive entities of existing companies). I shall discuss briefly the evidence bearing on each of these key areas.

*Work Incentives.* With reference to work incentives, our evidence is limited principally to tax effects on executive activity.[5] These effects, however, are of strategic importance both because business executives play a key role in a free enterprise economy and because they are subject to high marginal tax rates on their incomes and hence are in a position where tax effects on work incentives would be likely to be maximized.

In his investigation of the topic, Professor T. H. Sanders, on the basis of numerous interviews with executives and their associates in a wide range of areas and industries, arrived at the following conclusion: "The evidence . . . tends to show that the extent to which business executives have reduced their work and effort, as a result of taxes, has frequently been much exaggerated. The economy has not—as a tax consequence—lost a serious amount of such services. . . ." (Sanders, *op. cit.*, page 12.)

The gist of Professor Sanders' findings is that nonfinancial incentives typically outweigh purely financial incentives in such a basic decision as how a man spends his working life. Among the major nonfinancial in-

[5] The evidence for this section of our paper is derived mainly from Thomas H. Sanders, *Effects of Taxation on Executives* (Harvard Business School, Division of Research, 1951), and Challis A. Hall, Jr., *Effects of Taxation on Executive Compensation and Retirement Plans* (Harvard Business School, 1951).

centives which Professor Sanders cites are the sheer urge to do a good job; the power, prestige, and other satisfactions associated with a responsible position regardless of the level of its financial remuneration; a sense of loyalty to an organization and an objective; and the organizational disciplines imposed on anyone working in a group activity.

Substantially similar findings were reported by Professor Challis A. Hall in his study of *Executive Compensation and Retirement Plans* and by Professor Dan Throop Smith in his summary statement on "Taxation and Executives." Professor Smith states: "As regards the direct effects of high individual taxation on executives, I fully concur with the conclusions of Professor Sanders in his recent book that their day-to-day efforts and activities are in general not lessened by taxation."[6]

These findings by no means imply that taxes have no effect at all on executive behavior. Quite the contrary. The evidence is clear that taxes have exerted a pronounced effect on methods of executive compensation, tending to stimulate the use of various deferred compensation plans, especially pension plans, and also the use of such devices as stock options and stock purchase plans. Similarly, the wide range of nontaxable fringe benefits and perquisites provided to executives and claimed as business expenses, especially by the owner-managers of closely-held companies, undoubtedly is stimulated in substantial measure by tax considerations.

While developments such as these may be specialized in their impact and more concerned with the technique than the substance of what is being accomplished, they may have unintended incidental effects of substantial importance. Nonvesting deferred compensation plans, for example, tend to hold or freeze employees in their existing jobs, and hence to impair the improved allocation of resources that would be brought about by greater executive mobility. It is also suggested, though less definitely established, that deferred compensation plans often tend to develop a "play-it-safe" rather than a venturesome and enterprising management philosophy. Both these effects, through their qualitative influence on executive activity, could conceivably be of considerable importance to the long-run development of the economy, and they constitute an area which deserves examination in any fundamental revision of our tax structure. It should be noted, however, that some of the problems in this area arise not from the basic rate structure of the income tax but rather from technical features of the tax law. It could

[6] Dan Throop Smith, "Taxation and Executives," *Proceedings of the National Tax Association, 1951* (Sacramento, California, 1952), p. 235. While our researches have been limited to the effects of taxes on executives, such other information as is available on the effects of taxes on work incentives in other groups of the American economy points in general to the same conclusion. See, for example, the excellent discussion of this topic by Professor Break in the December, 1953, issue of the *National Tax Journal*.

be argued with considerable merit, for example, that the tax benefits accorded qualified pension plans should be denied to plans with severely restricted vesting rights.

The matters just discussed, however, can properly be regarded as footnote qualifications to the main finding on work incentives stated above. Certainly this is true insofar as the major decisions of tax policy now confronting the country are concerned. If continued high taxes are required to finance an adequate level of defense expenditures, I know of no evidence pertaining to the United States which indicates that the harmful effect of taxes on work incentives is currently so great as to require immediate tax reductions despite these needs.

*Incentives and Capacity of Upper Bracket Individuals to Save and Invest.* The evidence on the question of the incentives and capacity of individuals with large incomes to save and invest falls far short of validating the claim that these individuals as a class no longer can (or do) save large amounts and that they are no longer willing to take substantial investment risks.[7]

This finding holds despite the indisputable evidence that the tax increases of recent years have cut severely into the incomes of upper bracket individuals and undoubtedly also into their capacity to accumulate new investable funds, provided and to the extent that their incomes bear the full brunt of the individual income tax. The data also show, however, that as a group individuals in the upper income percentiles are still accumulating large amounts of new investable funds despite existing tax rates.[8]

Two reasons appear to explain the continued large accumulations of funds by individuals in the upper income groups. First, the habit of saving appears to be so deeply ingrained in most individuals with moderate to large incomes that it has survived the impact of the severe tax burdens of the past decade. All the evidence indicates that the overwhelming majority of the individuals in the top 1 per cent of the population—ranked by size of income—are still accumulating positive savings, and that the savings of at least half these individuals amount to a fairly sizable fraction of their incomes before taxes—say, a fifth or more.

Within the group of persons receiving very large incomes, it is quite

[7] This section is summarized from Butters, Thompson, and Bollinger, *op. cit.*

[8] Specific estimates of the percentage of total accumulations of new investable funds made by individuals in the top income percentiles are presented in Butters, Thompson, and Bollinger, *op. cit.*, Chapter V. It is there estimated that the top 1 per cent of all spending units with incomes of about $15,000 and over accounted for about 30 to 35 per cent of the annual accumulations of investable funds made by all spending units in 1948, and presumably also in other postwar years. The corresponding estimates for the top 3 per cent of all spending units are 45 to 50 per cent, and for the top 5 per cent of all spending units 60 to 65 per cent.

possible that those whose living standards were geared to high levels before the period of very high income taxes and whose disposable incomes have been sharply reduced by the imposition of such taxes, may have ceased to save significantly or may even be living off their capital in many instances. This group, however, appears to be more than offset by individuals whose incomes (both before and after taxes) have risen along with or after the imposition of very high tax rates. The evidence appears to indicate that as the income of such persons (say, young executive or professional persons) rises, the advance in their living standards is keyed to their disposable income rather than to their income before taxes and that, by and large, they continue to save despite the high income taxes which they must pay. In many instances, however, they obviously can do so only by accepting less luxurious living standards than their predecessors in equivalent positions were able to maintain in the era of low tax rates.

A second major explanation of the continued capacity of upper bracket individuals to accumulate substantial amounts of new investable funds is that there are numerous ways in which many groups of upper bracket individuals can accumulate new investable funds without having them subjected to the full impact of the individual income tax. In other words, for many groups in the economy the tax structure is much less severe than it appears to be on superficial examination. Since we have cited this fact as one of the major explanations for the moderate impact of the existing tax structure on incentives, it will perhaps be useful to list at this point some of the more important ways by which the full impact of the high upper bracket rates of the individual income tax can be avoided by sizable groups of individuals with large incomes.

1. There are a wide variety of circumstances under which the income received by individuals is partly or completely tax exempt. Among the more notable of these are interest on bonds issued by state and local government; interest on savings invested by individuals through insurance companies; and income offset by depletion charges in excess of the cost of the properties being depleted. Such opportunities for tax avoidance account for large amounts of tax-exempt income received by individuals with large incomes.

2. Certain categories of individuals with large incomes—notably owners of family businesses—are able to charge off substantial amounts of personal consumption expenditures as business expenses and hence to exclude them in computing their "adjusted gross income" for tax purposes. In addition, substantial components of the personal deductions—such as real estate taxes and interest payments on mortgages on owner-occupied homes—represent consumption expenditures with are, in effect, excluded from taxable income. Deductible contributions might

even be so regarded if they are assumed to constitute a source of personal satisfaction to the contributors. One of the principal problems in maintaining the integrity of the individual income tax is that of resisting the constant political pressure for the enlargement of items of personal expenditures which are allowable as deductible expenses.

3. The income of family units can often be split, by the use of trusts, gifts, and family partnerships, into several entities each of which is taxed separately. By this means the income of a family unit can be concentrated to a greater degree in the lower ranges of the personal income tax brackets than would be possible if it were all lumped together for tax purposes.

4. The corporate form of business organization can sometimes be availed of to avoid the individual income tax. Owners of closely-held corporations, in particular, can cause their corporations to accumulate undistributed profits which can frequently (though not always) be realized at the discretion of the owners at some later date. A variety of techniques exist by which such realizations may be qualified as capital gains or sometimes even be made partly or wholly tax free. Whether such accumulations of undistributed profits in closely-held corporations should be regarded as representing actual (though not taxable) income in the hands of their owners is partly a question of semantics and of personal value judgments as to the appropriate definition of income for tax purposes, but there is no doubt that they often (though not always) represent an increase in the real wealth of the owners more or less in the amount of the retained earnings.

5. The preferential treatment given to capital gains in general constitutes another major way—probably the single most important way—in which the full impact of the individual income tax rates is avoided. Once again, it is to some extent a matter of semantics whether capital gains are considered to be income, but there can be no doubt that they often constitute a source of new investable funds and of additional wealth in the hands of individuals. In this connection the increasingly large range of circumstances in which receipts formerly taxable as ordinary income now qualify as capital gains is accentuating the importance of this consideration.

6. There is a certain amount of deliberate or unintentional tax evasion which allows otherwise taxable income to escape taxation. The intensive auditing of tax returns filed by individuals with large incomes, however, severely limits such understatements of the income tax liabilities of upper bracket individuals.

While the data for appraising the extent to which advantage is taken of the opportunities of avoiding the full impact of the individual income tax are not very satisfactory, it can be safely concluded that the use

made of them contributes substantially to the surprisingly large accumulations of savings still being made by individuals with large incomes.

Besides curtailing the investment capacity of individuals, taxes could restrict the supply of funds which individual investors are able and willing to invest in business equities by reducing the incentives for individuals to risk their funds in such investments. The evidence on this point indicates that, on balance, taxes have had some such effects but that these effects have not been as pronounced or as pervasive as is usually believed.

Once again, a large part of the explanation is that, so far as investment decisions by individuals are concerned, the existing tax structure is in many respects a two-edged sword. For conservative investors—those whose primary investment objective is to preserve their capital intact or to obtain a moderate income yield without incurring an undue risk of capital loss—the high upper bracket income tax rates greatly reduce the incentive for persons with large incomes to take investment risks. To such individuals, the net return after taxes often appears too small to justify the danger of capital loss present in almost any equity-type investment. The balance, however, is often reversed for venturesome investors who place a strong emphasis on capital appreciation as an investment objective. The relatively low maximum tax rates on capital gains, as compared with the much higher rates on ordinary income, often increase the willingness of essentially venturesome persons to invest in risky outlets offering the potentiality of large capital gains.

In addition, certain highly risky forms of investment—especially those in mineral and petroleum resources—receive in effect a partial tax exemption in the form of percentage depletion deductions and the current deductibility of intangible drilling costs. In a very real sense, the higher the tax rates which are assessed against other forms of income, the greater is the incentive to invest in these areas—risky though such investments may be.

On balance, our findings indicate that during the postwar years the net effect of the tax structure has been to reduce somewhat the willingness of upper bracket individuals in the aggregate to make venturesome invesments, but not by a wide margin. In other words, for equity-type investments considered as a whole, the investors who were induced by taxes to shift to less risky investment positions appear to have overbalanced the opposite reaction of appreciation-minded investors. The latter group, however, may have been so stimulated by the tax structure to seek out investments offering unusually large capital gains potentialities as actually to increase the flow of capital to such situations. How-

ever this may be, it is clear that the combined impact of these effects on individual investors has fallen far short of drying up the supply of equity capital which such investors have been willing and able to make available to business enterprises in postwar years.

*Business Incentives and Capital Expansion.* Thus far I have been discussing the effects of taxes on work incentives and on the willingness and capacity of individual investors to save and invest. It remains to consider the effects of the tax structure on the decisions made by individuals acting as owners and managers of business enterprises. How have the heavy taxes imposed on business enterprises since 1940 affected the willingness and the capacity of the business sector of the economy to undertake the capital expansion and investments needed to maintain full employment and a vigorous rate of growth in the economy? How have taxes affected the structure of the industrial sector of the economy?

The answers to these questions, as best we have been able to ascertain them, parallel in many ways those sketched above for persons acting in their individual capacity as workers and investors. Just as there is little evidence that individuals in the aggregate have gone on an investment strike or have significantly reduced the intensity of their effort and activity because of taxes, so there is little evidence that taxes have curtailed corporate and business investment to undesirably low levels in postwar years.

No intensive or specialized inquiry is needed to justify this statement. With the exception of a slight breathing spell in late 1948 and early 1949, the economy has operated under conditions of full employment continuously since the postwar conversion period of 1945 and early 1946. The period as a whole has been characterized by upward price pressures, particularly in the industrial sectors of the economy. Private capital expansion has proceeded at an unprecedented pace. The evidence clearly indicates that the major bottleneck to the rate of new capital formation has been limitations of manpower and of technical capacity rather than the lack of adequate incentives or funds to finance this expansion.

In these aggregate terms, then, it can hardly be contended that the severe tax structure of postwar years, even with the excess profits tax, has acted as a serious brake on the economy as a whole. On the contrary, the taxes which have been imposed, along with other anti-inflationary measures, have been barely adequate to maintain a reasonable degree of financial stability in an economy characterized by extraordinarily powerful inflationary pressures.

Once again, however, it does not follow from the fact that the level of employment has been consistently high and the rate of capital

formation rapid that no concern need be felt over the effect of taxes on the industrial sector of the economy. It would be quite possible for the tax structure to exert a deadening and restrictive influence on the long-run growth and vitality of the economy without necessarily bringing about conditions of unemployment and depression. These effects could be brought about if taxes should greatly restrict: (1) the rate of formation of new enterprises, particularly of new enterprises with a large growth potential; (2) the rate of expansion of such enterprises relative to their large, established competitors; and (3) the continued existence of the "centers of initiative" represented by the independently-owned and -managed small and medium-sized companies in the economy.

Our findings on the impact of taxes on the structure of the economy in these three respects can perhaps be summarized as follows.

*Formation of New Enterprises.* Taxes appear to have had only a limited effect on the formation of new enterprises.[9] This is particularly true insofar as the effect of taxes on the desire or incentive of individuals to undertake new enterprises is concerned; the limited restrictions which taxes place on the formation of new companies operate more through their effect on the supply of capital available for this purpose than through the incentive route.

There are perhaps two main reasons which account for the limited effect of taxes on the desire of individuals to start new enterprises—especially those new enterprises which are believed by the promoter or entrepreneur to have a large growth potential. The first is that at the time a new business is organized only the crudest estimates of its profit potentialities can be made. The impossibility of estimating profits prospects with any degree of precision at this stage of a corporation's development tends to preclude a careful evaluation of the effect of taxes on these indefinite profits prospects—unless tax rates approach confiscatory levels and are expected to remain there. The force of this point, however, becomes weaker as a business develops to the stage at which more definite estimates can be made of its profits potentialities and the impact of taxes on these potentialities can be computed with more precision.

A second reason tending to diminish the importance of the incentive effects of taxes in the formative stages of a new business is that the kind of individuals who are interested in organizing new businesses are often motivated to a marked degree by nonpecuniary considerations. They tend to be aggressive, confident in their ability to succeed, anxious to be their own boss, and desirous of developing a new "idea" in which

[9] This section is based on J. Keith Butters and John Lintner, *Effect of Federal Taxes on Growing Enterprises* (Harvard Business School, Division of Research, 1945) and on our later observations, particularly the data for Butters, Thompson, and Bollinger, *op. cit*

they are intensely interested. If the organizer's primary interest is in the satisfaction of creating something new and in the power and independence that goes with a successful business development, as it often is, tax considerations tend to be viewed as of only secondary importance.

In considering the effect of taxes on the availability of funds for the inauguration of new enterprises, the appropriate starting point is to identify the sources from which such capital is potentially available. Our observations indicate that this type of ownership capital ordinarily must be supplied from the personal resources of the individuals directly interested in the business or by their immediate friends and relatives. Outside investors typically have very little interest in a new venture until it has advanced to a point where convincing evidence of its potential profitability can be cited. Generally speaking, until this stage of development is reached the preceding discussion of the effects of taxes on the willingness and capacity of outside personal investors to make venturesome investments is largely irrelevant to the problem of forming a new enterprise. As the enterprise progresses and is able to demonstrate more clearly its potential profitability, however, these considerations become increasingly relevant.

So far as the actual formation and the embryonic development of new enterprises are concerned, the supply of capital available for this purpose appears to be significantly affected by taxes in only one way. This is through the impact of the personal income tax on the capacity of the individuals immediately concerned to accumulate the needed funds for the development. Unless these individuals and their immediate associates can accumulate a minimum amount of capital with which to start the enterprise, the high probability is that it will never be organized. Since, however, there is no reason to believe that individuals with the desire and talents required to inaugurate a new enterprise successfully are heavily concentrated in the upper income brackets, it would hardly seem appropriate to put too much stress on this point. It is not clear, for example, that any feasible alternative tax structure would greatly alter the intensity of this tax effect for all potential new enterprises considered as a whole.

*Expansion of Existing Enterprises.* Inasmuch as Professor Lintner is considering this topic in detail in his paper, I shall merely state our major conclusions on this topic in order to fit them into the perspective of the present discussion. For present purposes the pertinent findings can be summarized in the following four statements: (1) The impact of taxes on the investment outlays and the rate of growth of existing enterprises appear to be much greater and more significant than most of the other tax effects considered in this paper. (2) The intensity of these effects on the growth of promising small companies is much

greater than that on the growth of their large, well-established competitors. (3) Both incentive and cash (financial capacity) considerations contribute to these tax effects, but the latter are usually the more powerful. (4) The corporate income tax and the excess profits tax (if one is in effect) have a much greater impact on corporate expansion and investment outlays than does the personal income tax.[10]

*Sales and Mergers of Business Enterprises.* A third major way in which taxes could affect the basic structure of the economy is by stimulating the owners and managements of existing companies—mainly closely-held companies—to sell out or merge with other companies. The tax system does exert powerful pressures on the owners of many such companies to sell out or merge.

In the first place, such sales may be made to lessen the impact of the estate tax. The sales in this instance may be stimulated by the liquidity problems encountered in meeting estate tax liabilities if the business is still in the estate at death; they may also be caused by uncertainties regarding the valuation of the business for tax purposes.

In the second place, sales or mergers of closely-held businesses may be prompted by a desire to minimize the impact of the personal income tax and of the Section 102 penalty tax on unreasonable accumulations of corporate surpluses. In the most general terms, these sales are made to enable the owners to withdraw profits from the firm by the capital gains route. This is obviously an attractive alternative to having the profits distributed as dividends which would be subjected to the upper bracket rates of the individual income tax or to leaving the profits in the company and having them possibly subject to penalty taxes under Section 102.

These tax effects have undoubtedly provided a major part of the motivation for the merger or sale of many independent enterprises, and in this way tended to increase the degree of industrial concentration and to reduce the number of "centers of initiative" in the economy. But it would be incorrect to stress the importance of this fact too strongly. For the conditions under which these tax effects exert their full force are highly specialized and apply to only a small proportion of all small and medium-sized companies. Moreover, even when the tax incentives are important, they are not necessarily controlling.

The problem of whether or not to sell out a closely-held business is very complex and embraces the whole range of human motivations and interests. Frequently such matters as the desire to retire, to avoid the ever increasing red tape involved in managing an independent enter-

[10] Points one and three are discussed in Professor Lintner's present paper; the evidence in support of points two and four is developed in Butters and Lintner, *op. cit.* The subsequent evidence from the later study of *Investments by Individuals*, cited above, also points to the same conclusion.

prise, to provide for management succession, to become associated sometimes as an officer or director with a nationally known company, to achieve competitive advantages, to consolidate a risky investment position, and a host of other similar reasons may far overshadow tax considerations—even when the conditions needed to make tax considerations important are met. Conversely, in other situations an owner's desire to maintain the control and management of his enterprise may be so intense that he will resist or ignore strong tax pressures to sell out or merge. In still other instances action short of a sale or a merger, such as a public sale of part of the ownership interest in the company, may be taken to alleviate the tax pressures.

All in all, it would seem misleading to place great stress on the extent to which tax-stimulated mergers have altered the basic industrial structure of the economy, or are likely to do so, in appraising the need for immediate revisions in the tax structure. As with most of the other specific problems discussed earlier in this paper, a careful investigation of the facts does not reveal a situation so acute as to justify tax reductions which would sacrifice significant amounts of tax revenues needed to maintain fiscal stability or to finance public expenditures of a high order of priority. Tax-created pressures to sell out or merge do, however, constitute one more instance in which the existing tax system exerts a stratifying and rigidifying effect on the basic competitive structure of the economy, and as such they constitute one among many considerations which demand attention in any long-run revision of the tax structure.

## III

This discussion of the effects of taxes on the sale and merger of independent enterprises completes our examination of the key areas in which taxes seem most likely to impair the incentives and the financial capacity which are vital to the successful functioning and growth of the economy. Time will not permit a systematic discussion of the implications of these findings for national policy. There is, however, one point which deserves reiteration.

Insofar as the major policy issues now confronting the nation in the areas of public expenditures and taxation are concerned, the evidence clearly supports the conclusion already stated; namely, that the high taxes of the last fifteen years have not produced a crisis situation which calls for drastic and immediate action on the tax front. If the demands of national defense and fiscal stability require a continuation of the current level of tax rates for another several years, our studies have produced no evidence to indicate that the economy will suffer serious long-run damage thereby. The claim frequently voiced in Congressional

quarters and elsewhere that expenditures must be greatly reduced at an early date in order to preserve economic strength at home, almost regardless of the international consequences of these reductions, is not, I believe, substantiated by the facts.

As a long-run proposition, there is substance to Secretary Humphrey's position that "our way of life is threatened, not from one, but from two sources at the same time. It can be lost just as completely by economic deterioration from within as by aggression from without." (Address by Secretary of the Treasury George M. Humphrey, April 20, 1953.) In the short run, or even in the intermediate run, extending over a considerable period of years, however, I believe that it would be a rash public policy which would evaluate the danger of economic deterioration from within, caused by the present tax structure, as being of the same order of magnitude as that of aggression from abroad. In terms of the major policy decisions now confronting the nation, this, in my judgment, is by all odds the most important policy implication of the data and analysis summarized in this paper. (Space does not permit a more extended development of the policy implications of our discussion in this paper. Some aspects of the matter are developed in more detail in Butters, Thompson, and Bollinger, *op. cit.*, pages 62-68, and in Professor Lintner's accompanying paper.)

# EFFECT OF CORPORATE TAXATION ON REAL INVESTMENT

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Corporate income taxes can influence the volume of investment which corporations will undertake by affecting companies' incentives to make new investments and the supply of funds available to finance them from both internal and external sources.[1] Although the effects of corporate income taxes can be shown to differ significantly in both respects if and to the extent the tax is shifted,[2] it will be assumed throughout this paper that the entire short-run burden of the tax falls on the corporation and its shareholders. The conclusions will be valid with respect to the probably predominant part of the tax which is not so shifted. Also, in order to isolate the effects of the corporate tax as such on investment, it will be assumed throughout that government expenditures are fixed in amount independently of corporate tax rates. Since alternative sources of revenue would also reduce investment, however, the net restriction of investment attributable to using corporate income taxes will be less than the direct effects considered would indicate.

The first section of the paper will deal with the effects of an unshifted corporate tax on investment incentives. The following section will consider in a more summary fashion the effects of the tax on the volume of investment due to restrictions imposed on the ability and willingness of companies to finance desired outlays. Major conclusions are brought together at the end.

## I

An unshifted corporate income tax will reduce the net profits which can be expected on new investments to expand capacity and the net profits to be realized from aggressive replacement of existing facilities by

[1] This paper draws extensively upon the field studies of investment decisions and capital budgeting practices which the author has under way, in association with John Matthews, as one part in the series of studies being made under a continuing grant from the Rockefeller Foundation for work in the general area of profits and the functioning of the economy. It also draws, in addition to other available literature, upon materials and work done in connection with the series of tax studies undertaken in the Division of Research of the Harvard Business School with which he has been associated in varying capacities. Joint work with Professor J. Keith Butters, and continuing discussions of these problems with him, have made a particularly significant contribution. The paper also reflects the benefit of many helpful conversations on related matters with Professors D. T. Smith and Ross G. Walker.

[2] This analysis, omitted because of space limitations, will be published elsewhere.

the full extent of the tax liability. (There may be an offset in replacements due to the updating of deductions for depreciation on discarded facilities.) The resulting impairment of profit incentives can be very substantial. Even when full loss offsets are available, expected returns will be reduced in the ratio of the increase in rates to the complement of the old rate.[3] The investment-demand schedule of theory is displaced downward by relatively more percentagewise than the percentage point increase in rates. A twenty point increase in an existing 40 per cent tax, for instance, will lower the investment demand curve by one-third. Moreover, the relative downward displacement will be greater, for any given rate increase, the higher the base rate.

Clearly, if management requires some given minimum net rate of return to compensate for the risks, effort, and loss of liquidity involved before investments will be made,[4] and if investment schedules are elastic, high tax rates and increases in such rates can shut off relatively large volumes of investment. But while there is little question such theoretical conclusions have considerable practical significance, there are substantial reasons for believing the restrictions in investment due to the effects of taxes on investment incentives have actually been much smaller and less important in practice than has generally been presumed.

1. Simply as a matter of theory, suppose all managements were to insist without exception that all investments satisfy some unchanged minimum expected return after tax regardless of other considerations. Even in this case, the maximum relative reduction in the volume of investment which can be attributed to the incentive effects of a tax increase is the product of the percentage reduction in net returns and the elasticity of the investment schedule. Implicity or explicity it has been assumed that the relevant elasticities are substantial, but evidence that the investment schedule is actually elastic is lacking. The qualitative or directional effect is unquestioned, but magnitudes and practical consequences depend on empirical content which so far has not been marshaled and analyzed in this connection. At this time, we need only note that the usual judgment regarding the responsiveness of investment to changes in interest rates (which are taken to measure cost of capital, and hence on profit-maximization principles, required minimum returns at least on an index basis) is just the reverse of that implicity made in discussions of the tax problem. If the over-all investment schedule is actually no more elastic than empirical and analytical studies of these related questions

[3] For adjustments required to allow for accelerated depreciation, see E. Cary Brown, "Business-Income Taxation and Investment Incentives," published in *Income, Employment and Public Policy* in honor of Alvin H. Hansen (W. W. Norton and Company, 1948), pp. 300-316.

[4] See the excellent discussions in Richard Goode, *The Corporation Income Tax* (John Wiley & Sons, 1951).

indicate,[5] the reductions in investment due to the incentive or "demand side" effects of increases in tax rates will be very much smaller than usually supposed.

2. The available evidence indicates that many if not most managements do have in mind some sort of minimum return which contemplated investments must satisfy if they are to be undertaken, at least so long as they are not justified on other grounds. (These minimum rates frequently differ in the same company for different types of investment, and they may vary over time. These refinements, however, while highly significant in other connections, are not important in the present context.) Although many companies require at least given prospective rates of return after taxes on such investments, others state the returns required for favorable consideration as minimum rates of profit before taxes and make their investment decisions largely if not entirely on this basis. These latter companies, significantly enough, include some of the large, progressive companies generally regarded as being very well managed. Among this latter group, there is also evidence that the standards of minimum acceptable pretax return are adjusted sluggishly and incompletely, and sometimes not adjusted at all, to changes in tax rates. Moreover, we have observed cases where companies in the former group which use a cut-off rate of return after taxes have formally or informally adjusted this rate downward as taxes increased. In both cases, the return required after taxes is not substantially unchanged as usually assumed in theory, and the reductions in investment attributable to the incentive effects of taxes will be correspondingly lower.

Lest the significance of these observations be lost, it should be added that the practices mentioned can only partially be explained by expectations that higher tax rates are temporary and hence should be discounted in judging investment performance. To an important degree in large widely-held companies such practices are often a part or a corollary of a well-established approach to investment decisions within the context of a relatively stable dividend policy taking account of managements' full range of objectives for the company.[6] In such companies, the practices may also reflect the importance attached to stand-

[5] It is significant in this context that the recent "rehabilitation of the interest rate" has emphasized availability of funds in imperfect capital markets more than interest elasticity as such. "Availability" is a "supply of capital" effect rather than an incentive effect. The treatment below emphasizes both availability of funds and also their acceptability under the impact of taxes.

[6] To avoid any possible misunderstanding, it should also be emphasized that the focus and purpose of this entire paper is analytical, not normative. It represents an attempt to trace out the effects of tax changes on investment, taking as full account as is yet possible of the way businessmen actually behave and respond to changes in conditions; it does not at any point attempt to judge whether given practices are good or bad, rational or irrational, well conceived to attain either social or private goals or deficient in either framework of possible objectives.

ards of performance[7] imposed on division managements. In closely-held companies, such practices also reflect the fact that major increases in corporate taxes have occurred within a context of already high (and often simultaneously increasing) personal income taxes buttressed by Section 102 and possibly magnified fears of its enforcement.

3. Companies look to the amount of potential loss involved in investments as well as to the rate of return that will probably be realized if the outcome is successful. This will be true especially where investment decisions are determined by strict profit considerations. But high taxes or increases in taxes reduce the net loss if a project turns out badly in the same proportion as they reduce the net gain expected from a successful outcome, so long as the commitment does not exceed the reasonably assured taxable income from all the company's other continuing operations when the full period over which losses can be carried forward and backward is considered. A large part of corporate investment is doubtless made under conditions satisfying this criterion. These reductions in net potential loss with higher tax rates will probably also make corporations somewhat more willing than they otherwise would have been to undertake investments justified by considerations other than profit return.

Also, to the extent that investment outlays can be charged as an expense against otherwise taxable income in the current year, high or increased tax rates will have a stimulating effect on investment decisions which must be allowed as an offset against their repressive effects on profit incentives. We cannot, however, go so far as Domar and Musgrave to hold that such reductions in private risk will lead to a net increase in investments undertaken so far as incentives are concerned, because, among other reasons, the maximum degrees of divisibility, independence, and diversification possible in real investments of corporations fall far short of that which they assumed in discussing financial investment. (See Evsey Domar and Richard Musgrave, "Proportional Income Taxation and Risk-Taking," *Quarterly Journal of Economics*, May, 1941, pages 388-422.)

4. In actual practice, considerations of profitability enter into investment decisions in a much broader context of other considerations and objectives than has been reflected in the theoretical models used to dis-

[7] Divisions are often held to given minimum over-all rates of return before taxes on the capital used by the division and new investments are carefully screened by the division managements to make sure that none promising a lower return get by (unless strongly justified by "other considerations"—as many are, the hope being the "high payers" will "carry" the others). Both before- and after-tax returns are considered by top company management, but there is a disposition to accept projects with adequate pretax return even after taxes have increased so long as funds are readily available (especially from internal sources) and generally prospects are favorable. The touchstone is "the division needs it to meet its performance standards."

cuss the effects of taxes on investment. The modern corporation is not a simple one-celled organism motivated exclusively by profits. Satisfactory profits are one of the basic objectives of its over-all operations, and in most, if not all, cases where satisfactory profits are not being obtained, profit considerations will become more important and they may become controlling. Nevertheless, other factors neither directly nor monotonically reducible to increments of profits often loom large in investment decisions, as they do in other aspects of company policy. So long as profit positions are not unacceptably low and the necessary funds are available on acceptable terms, very substantial amounts of new investment are likely to be undertaken even where there is no good evidence that the individual investment moves will add enough to net profit to make them worth while on that ground alone. Moreover, under these conditions, if an investment is primarily justifiable on grounds of profit and it is marginal on this basis or is made marginal in these terms by a tax increase, another investment directly justifiable on other grounds is likely to be made in its stead. Since investment policies serve a number of different management and company objectives, not just greater profits alone, the degree of reduction in the volume of investment attributable to taxes on incentives will be seriously overstated by considering simply the effects of the tax on profitability.

There is no question, for instance, that a very substantial part of all plant and equipment expenditures are justified in the eyes of management as elements in broad strategic plans to maintain or improve competitive position and insure market shares and orderly growth. Firms that have gotten somewhat ahead will endeavor to maintain their leadership and strengthen their position with moves that often require large plant and equipment outlays. It is doubtless true, of course, as Schumpeter emphasized, that most managements in such matters are followers rather than leaders. But where other firms are moving ahead, any given management knows that failure to maintain relative product quality, failure to maintain adequate capacity to produce the outputs required by its "rightful" share of the market in a growing industry, or failure to introduce new equipment and techniques necessary to avoid becoming a relatively high-cost producer—to cite a few examples—will result in loss and possible ultimate failure. Moreover, in progressive industries, vigorous competitors will be basing their judgment on what they think (or what they are afraid) other leading firms are (or may be) going to do—not simply on what they have already done except insofar as a vigorous, progressive past is properly extrapolated to the future. One or a few firms "hell-bent for progress" can so stack the cards in the competitive game that others must follow suit or lose out, and it seems likely that most real competitors will go ahead and invest despite high

taxes so long as necessary funds are available. And if anyone doubts that these real competitors in investment for market share and position include an important part of what are traditionally thought of as oligopolistic industries, let him consider G. E.–Westinghouse and G. M.–Ford in recent years, and then continue his studies.

Management of course knows that its future profits depend heavily upon its success in maintaining or improving its position in the industries and markets within which it operates. It nevertheless appears that only a modest part of investments made to meet competition or gain market share and competitive advantage are (or can be) justified on the basis of an estimate of incremental profit return which is sufficiently precise to be affected at all definitely or significantly by changes in tax rates. It also appears that even to the extent that management justifies such investments on the basis of their profitability, the restrictive effect of taxes on the total volume of such investments will be weaker than suggested by applying the full tax rate to the entire potential profit justifying the investment for management. In such situations, the "profit" that management is thinking of often includes very importantly the avoidance of major continuing losses and the possible ultimate failure of the company which management feels would ensue if position were lost because the investments were not made. Since large losses of this character often cannot be offset against taxable income, the profit incentives of avoiding such losses will be little affected by high and increasing tax rates.

Another important reason that the restrictive effects of high tax rates on such investments is much weaker than usually presumed is the fact that maintenance of competitive position in itself is usually a major factor in managements' decisions and will frequently be determining especially where the decision is otherwise close or uncertain. Market shares and competitive position carry prestige and status values—both for the company and its management—which make them significantly distinct objectives of policy and give them an independent influence on decisions. High tax rates may reduce the net return to the company of maintaining its competitive position, but its desire to do so is likely to be just as strong as ever. It is even probable that the impairment of the profit incentives resulting from high taxes in itself will often increase the importance of such nonprofit criteria as the maintenance or improvement of competitive position. (The same judgment applies to growth for growth's sake, stability, and other objectives mentioned later in the text.) Further, investments which are considered "necessary" in these terms are often made without any very careful attention to anything else if funds are available. This is true even though a large part of the emphasis on market shares and competitive position has had its origin

in concern with these matters as a means to insure long-run profitability. Managements' reactions to these factors tend to become habitual and set in patterns which are not subject to frequent re-examination, and decisions will often be made on the tacit presumption that whatever serves the proximate means (competitive position) will necessarily promote the long-term end of profits, even when, as in the case of tax changes, the effects of new developments on competitive position and profitability may greatly differ.

In a similar way, diversification and avoidance of risks often become controlling objectives in managements' decisions, and many investments are made for these purposes without either separate or specific examination of incremental profits as such, even where such calculations could presumably be made. Similarly, inventory investment will often be largely determined either residually by sales and production schedules or by efforts to maintain a proper balance between them and not by calculations affected by tax rates. The same conclusions also apply to further broad classes of investments—such as those made for the sake of general good will for the company or for more harmonious employee relationships or for some vaguely defined prestige reasons—whose justification is related to profits only very remotely and generally.

We of course recognize that some of these objectives can also be rationalized, at least partially, in terms of at least long-run profits. But here again, management is inclined to treat these objectives as rather distinct ends in themselves, and its decisions do not turn solely, directly, or in any simple way on the distinct profitability of investments which clearly serve these other goals. Consequently, the effects of changes in tax rates upon incentives to make such investments is probably limited so long as funds are available on acceptable terms.

In many cases the uncertainties involved in estimating profits are so great and other considerations are so important that management's final decision is based on simply the general "feel" of the whole prospective undertaking, and it is difficult if not impossible to attach any clear or separate significance to the profit factor as such. Management's conception of the appropriate broad strategy for the general growth and development of the company and its general idea of "the kind of company we want to have" are likely to be particularly important in decisions that involve taking on new product lines, going into new marketing territories, or establishing new branch plants, or opening up new productive facilities. In all such cases, management makes up its mind on the basis of all of the considerations relevant to the entire broad program, and it accepts or rejects the program as a whole. Profits enter in as an important element in these considerations, insofar as they can be judged at all; but they are only one of the important factors that will be

weighed. Moreover, the "investment" elements are merely a part of what is involved in the single strategic decision for top management,[8] and the investment component itself will be made up of a large number of distinguishable elements, such as building, particular pieces of equipment, additional facilities, inventories, and so on. If the usual theoretical formulation of demand curves were applied to the situation, the elasticity of demand for the investment involved in the over-all decision, and particularly for each component investment, would often be low. Each unit is merely one of the numerous co-operative parts making up a broad integrated operational program, and failing to go ahead with any particular part may seriously compromise the successful completion of the whole operation. Once again, taxes will often have relatively little effect on incentives to make these investments.[9]

In short, there is a large volume of investment made in good times to serve objectives which are not directly or strongly subject to tax influence, and there is also a relatively large volume of investment whose profitability is so conjectural and uncertain that tax changes are lost in concern with more tangible and, in the eyes of management, more important considerations than tax effects. The elasticity with respect to profits subject to tax effects of an investment schedule made up entirely of these investments would be very low, if not zero. The elasticity of the schedule made up of those other investments which are appraised primarily in terms of criteria emphasized in the usual theory may or may not be substantial; we simply do not know. But in either event—assuming the former group proves to be as large as field work now under way suggests—the elasticity of a schedule of all investments would be much smaller and may actually be rather low, at least under favorable business conditions when most investments are made.

5. There is, however, another type of situation where the size of the elasticity need not worry us: it is largely or completely irrelevant because the volume of investment that will be made in any given period is primarily determined by other bottleneck factors. In these cases, the effect of high and increasing tax rates upon the volume of investment may be negligible even where management has definite minimum

[8] The over-all program which management accepts or rejects will usually involve, in addition to substantial investments, the development of an adequate management line organization to handle the new operation, gathering and shaking down a labor force to produce the product, developing a whole marketing and merchandising program and carrying it out, as well as establishing necessary additional staff facilities for effective management control of continuing operations.

[9] It is well known that investments will frequently be cut back or plans abandoned quickly and sharply in the event of a downturn in business conditions or prospects, but these developments must be distinguished from the proposition stated in the text, since they involve shifts in the position of the investment-demand curve and leftward shifts in the supply curve representing reduced availability of funds. The text is confined to the effects of taxes, *ceteris paribus*, given the position and shape of the demand curve.

standards of profitability which individual investments must meet and where profit considerations would otherwise be controlling. Two such situations will be considered briefly.

In numerous companies, for instance, the volume of new profitable investment opportunities being turned up is substantially larger than can be handled with the company's management organization and staff. Too rapid growth has proved embarrassing in the past, as a result of excessive strain on other parts of the organization, or because of loss of customer good will or other unhappy developments attributable to undigestible rates of expansion. In such cases, an expectation that a new undertaking will be profitable may still be a necessary condition for the investment to be made; but it is not sufficient, because management "capacity" is the bottleneck factor. In consequence, these companies operate most of the time well back into the intramarginal range of investments so far as profitability is concerned, and substantial increases in taxes in such cases would not reduce the total volume of investments actually made.

The same situation arises so far as incentives are concerned where companies have a firm over-all policy of limiting investment outlays to the amount of funds provided by current operations after paying dividends at a stable rate to stockholders.[10] In such cases, taxes may of course substantially reduce the volume of investment expenditures because they reduce the volume of retained earnings and thereby the company's ability to finance new investments within the confines of its overriding company policy. But our concern here is with the extent of the reductions in the volume of investment attributable to the effect of taxes on incentives to invest. If the supply of funds for investment is completely inelastic, both the elasticity of the demand schedule and the extent of its vertical displacement by tax changes will be irrelevant so long as the intersection of the supply and demand curves after the tax increase are still above the minimal cutoff rate of return management has in mind. In these cases there will be no reduction in the total volume of investment undertaken because of the reduced rates of profit expected on each investment project, so long as the volume of retained funds was the bottleneck factor both before and after the tax change.

In summary, a substantial increase in taxes would be expected on the usual theoretical grounds to restrict severely incentives to undertake new investments. Nevertheless, the growing body of evidence regarding the character of the management decisions which determine the volume of investment—especially the apparent importance of considerations

[10] The same conclusions follow if dividends change systematically in response to movements in profits after tax. There is evidence that for significantly large groups of companies this factor, along with lagged dividends, provides an excellent explanation of the volume of dividend without recourse to other factors. See below for references cited in footnotes.

and practices not clearly or directly subject to tax influence and of motivations other than profit maximization as usually conceived—leads to the general conclusion that the depressing effects of taxes on incentives to invest, while they may be important and substantial, are nonetheless considerably more restricted than has usually been thought.

There are several reasons for believing that this general conclusion is likely to be particularly strong and significant when general business conditions are prosperous and expectations are buoyant. If current and prospective sales are relatively large, the volumes assumed in estimating prospective profitabilities are likely to be high and doubts are more likely to be resolved optimistically than pessimistically both at lower echelons and among top management, so that distinctions that might otherwise be drawn become blurred because they seem less important. With business good and general prospects thought to be favorable, current profits will more generally be up to or exceed satisfactory levels and there will be more leeway for what in leaner times might be regarded as longer shots or outright luxuries. In particular, there will be more leeway for projects justified on grounds other than profitability as such. Moreover, since such good times are periods when output is most likely to be pressing on capacity, more investments will go through as "necessitous" (either without any careful estimates of profitability or showing extraordinary profitability as current demands are extrapolated optimistically). Also, it is in these periods that competitors will be making their investment moves, and the importance of competitive position will counsel the wisdom of investments otherwise doubtful and, as previously argued, make the relevant schedules of theory more inelastic and less responsive to tax considerations. Finally, with profits exceeding preliminary projections (as well as more sluggishly moving concepts of satisfactory levels) and with funds more readily available, managements are generally in the best possible position to undertake major strategic moves and the investments that are involved in them.

But squeaking wheels do get grease. And business management, like everyone else, concentrates on what seems to be most important at the moment. Profits—and with them the profit factor in decisions, investment or otherwise—get more attention when they are slipping than when they are improving. Profits also get more attention when they are below generally satisfactory levels than when above; and they get still more when entered in red than in black ink. As such conditions develop, the proportion of all investments which have to justify themselves on grounds of outright profitability tends to increase, and the soundness of profit estimates and justifications in terms of profits are examined more thoroughly and carefully. Differences in profitability that would have been slurred over or ignored in favorable times are brought to light and acted upon. Necessitous investments and those justified pri-

marily "because we have to do it to keep up with competition" fall off. In short, my judgment on the basis of studies to date is that the relative change in the volume of investment due to the incentive effects of taxes will be greater under less favorable business conditions and prospects than in more prosperous and buoyant times. (The absolute reduction due to incentive effects, of course, may well be smaller even though the relative reduction is greater.) The principal exception would seem to be during the trough of a major depression.

## II

During periods when levels of activity are high or rising and prospects are favorable, at least, the volume of investment is probably reduced more seriously by the impact of an unshifted corporate income tax on the financial capacity and willingness of companies to finance new investments than it is reduced by the effects of the tax on investment incentives. In other words, the volume of investment not undertaken because of the effects of the corporate tax on the availability of capital on acceptable terms is probably generally greater under these conditions than the volume of projects abandoned because of reduced incentives where adequate financing is available on acceptable terms in spite of the tax.

This judgment applies particularly to periods of markedly improving or generally prosperous business conditions with buoyant expectations. As previously noted, the impact of taxes on investment incentives is probably relatively greater under other less favorable conditions, barring a major depression. At the same time, the effect of taxes on financing available internally will be relatively much less with lower profits, and the relative importance of outside permanent financing (measured, for instance, by the ratio of the net changes in long-term external funds acquired to gross investment outlays) may also be less when business volume is not high or rising rapidly and expectations of both lenders and borrowers are more pessimistic. Under these less favorable conditions, the relative balance might be reversed.

Increases in unshifted corporate taxes will generally tend to reduce the volume of new investment undertaken by the amount of the reduction in net income after taxes, except insofar as dividends are reduced or reliance upon external financing is increased to make up the funds taken by taxes.[11] An increase in corporate tax rates will reduce funds

[11] In some cases investment may be sustained by cutting into cash and marketable securities, and there will be some lag in the reduction in investment among other reasons because the increase in tax liabilities is a "source" in the flow of funds statement until the liability is discharged. The increasingly prevalent practice of funding tax liabilites, however, reduces the importance of these considerations in the present context. At this time I shall not attempt to analyze the effects of changed taxes on net working capital positions and requirements. It seems quite unlikely that these elements would require any significant change in the major conclusions being drawn in this paper. This is not to imply, however, that liquidity considerations have no importance in investment decisions.

internally available for investment and dividends relatively less than the percentage reduction in profits because of depreciation and other noncash accruals, but the reduction is usually quite substantial for large tax increases in good times. The difference between a 40 and a 60 per cent unshifted corporation income tax would reduce the internal funds available to manufacturing corporations before dividends by nearly 25 per cent, using data for the second quarter of 1953 for illustrative purposes (FTC-SEC *Quarterly Financial Report*, U.S. Manufacturing Corporations). But under less favorable conditions the relative reduction will be relatively much less. The same tax change would have reduced internal funds, using data from the second quarter of 1949, for instance, by only 15.6 per cent, or about two-thirds as much.

Some of this reduction in internal funds may be made up by reducing dividend payments to stockholders. But all the available evidence indicates that managements of firms accounting for the great bulk of all corporate dividends, profits, and taxes place a rather high premium upon stability and continuity in dividend payments. Dividends are usually adjusted to reflect only part of any current change in net profits. For all American corporations together, dividend policies have been sufficiently uniform over time, in spite of tremendous increases and decreases in tax rates, that net cash dividend distributions show a correlation with current net profits and the previous year's net dividend payments of .967 over the entire period 1918-51,[12] and the equation fitted to 1918-41 "predicts" postwar dividends with a mean error of only 1 per cent. (These estimates are based on the regression using profits adjusted for inventory gains and losses.) The marginal dividend-net profit coefficient is 13.5 per cent. For all corporations together, it is probably reasonable to expect that any change in unshifted corporate income taxes will affect funds internally available for investment by more than six-sevenths of the difference in net profits.

The extent to which this reduction in internal funds due to increased corporate taxes will actually restrict expenditures on business investment rather than stimulate increased reliance on external financing depends upon a variety of specific circumstances and will vary substantially from case to case, but several general observations appear to be justified.[13]

When business conditions and prospects are favorable and when both the equity and liquidity positions of large numbers of firms gen-

[12] See Lintner, "Determinants of Corporate Savings," Chapter 14 in *Savings in the Modern Economy*, ed. Walter Heller *et al.* (University of Minnesota Press, 1953), pp. 248-253. The years 1936 and 1937 were excluded from the regression because of the undistributed profits tax.

[13] See J. Keith Butters and John Lintner, *Effect of Federal Taxes on Growing Enterprises* (Harvard Business School, 1945) and Professor Butters' article, "Federal Income Taxation and External vs. Internal Financing," *Journal of Finance*, September, 1949, for a fuller development of these matters.

erously satisfy both lenders' (and often more importantly managements' own) standards of financial prudence—and would continue to do so even after new funds were obtained—it is very probable that many of these firms will make up a substantial part of any tax-induced reductions in internal funds by resorting to outside debt financing for investments that seem desirable. The postwar period is a notable illustration. Debt issues and private placements in 1946-52 amounted to about 58 billion dollars.[14] While much of this debt would have been incurred anyway, there is no question that a considerable part of it was incurred to maintain desired and needed levels of investment in spite of high tax rates.

Use of outside debt when these conditions are satisfied is of course stimulated by the fact that interest is a deductible expense, so that prospective returns and costs are reduced proportionately by increased tax rates. But even with this deductibility and even when the conditions specified above are well satisfied, it is most unlikely that investment volume will be maintained at the level it would have otherwise had by increased debt financing. In part this is because some companies have very firm policies of avoiding any debt other than short-term or seasonal financing. Another and perhaps more important reason is that managements generally, even under very favorable conditions, are more reluctant to make investments requiring outside capital than those that can be financed internally. Moreover, they become increasingly reluctant to make investments as more outside capital is required even though cost of the capital is the same and "coverage" remains comfortable. In theoretical terms, the supply curve of capital as management acts upon it, has a marked upward discontinuity at the point where external financing is required and thereafter it is upward sloping. (This reflects many considerations, including the burdens and costs of credit negotiations, some inertia, and, importantly, elements of increasing risk augmented by an inherent psychological reluctance to be less conservative in financial matters.) The leftward displacement of this supply curve due to tax reductions in internal funds shuts off investment even if the demand curve is entirely unchanged and both the level and shape of the supply curve are also entirely unaltered. In addition, the corporate tax will probably "curl" the supply curve upward and to the left, and increasingly so as one moves farther on to the right from the point of discontinuity where internal funds are exhausted.

To the extent that any one of the conditions listed above becomes less favorable, the proportion of tax-induced reductions in internal

[14] See the preliminary estimates appearing in D. H. Brill, "Financing of Capital Formation," Conference on Research in Income and Wealth, October, 1953 (mimeo.). Use of outside capital was, of course, encouraged by special provisions of the excess profits taxes in effect during part of this period.

funds which are reflected in reductions in investment outlays will tend to be increased. Fewer firms are likely to be willing to use outside capital at all, and the relative restrictions in investment of others may also be greater because these will be willing to use less.

Only when the stock market is at very favorable levels will management generally be able or willing to use new equity issues to sustain investment volume at desired levels in spite of the loss of internal funds due to higher taxes. Even under these conditions, the use of outside equity is likely to be rather modest and very largely confined to a relatively limited number of the larger, more favorably situated and regarded firms. It is noteworthy that despite generally high market levels by historical standards since the war, equity issues have been less than one-fourth as large as new debt and private placements during the same years 1946-52 (the ratio is about one-tenth if regulated industries are excluded); and they were only about one-eighth of tax liabilities and about one-tenth of plant and equipment expenditures.

The extent to which companies can—and also, generally speaking, will be willing—to maintain investment in the face of tax restrictions on internal funds progressively diminishes as one moves down the scale from the blue chips to small unseasoned concerns. The availability and the terms involved in getting outside capital (both debt and equity) generally worsen progressively as one moves down along this size scale, quite apart from the effect of corporate taxes. In both respects, high corporate income taxes serve to compound the situation, and these effects make the use of outside capital progressively less acceptable for a variety of reasons, including considerations of financial prudence, concern with maintaining control and freedom of action, and other nonfinancial motivations. We should specifically note that while for many larger companies the after-tax earnings cost of equity capital will probably be no higher and may be somewhat decreased by increasing income taxes, the after-tax costs of such capital for smaller, rapidly growing firms will be increased because of the cumulative restrictions which high corporate taxes impose on the prospective growth of such companies which provides the principal attraction in the market for their stock.

## III

The major conclusions reached regarding the effects of the corporate income tax on levels of investment are:

1. An unshifted corporate income tax will significantly reduce the volume of investment which would otherwise be undertaken by reducing financial incentives and also by restricting the availability and acceptability of capital to finance investment. Under most business conditions, both effects are important.

2. With booming business conditions and such other extraordinary stimulating factors as have marked most of the postwar period, however, the actual reduction in the total volume of real investment by corporations may be relatively small—as it has been during the last seven or eight years. Under such conditions, companies accounting for a large fraction of all investment can draw on outside capital to make up reductions in internal funds due to higher taxes, and investment incentives are generally so strong that, even though reduced by taxes, they will still call forth all the investment the economy can handle without serious disruption in other demands and added inflationary pressures.

3. Under generally prosperous business conditions and with generally bouyant expectations but without such abnormally favorable circumstances as characterized most of the last decade, an unshifted tax will reduce the volume of investment much more seriously. Under these conditions, the effects of the tax on the supplies of capital available on acceptable terms to finance investment will generally reduce the volume of investment more seriously than the effects of the tax on investment incentives. Among other reasons, the over-all effects on investment incentives will be considerably less than on financial incentives alone.

4. Under generally less favorable conditions and prospects, the relative importance of incentive effects and "supply of capital" effects probably shifts in favor of the former, and the balance between the two may even be reversed.

5. The above findings, together with those reached elsewhere (Butters and Lintner, *op. cit.*), lead to the further conclusion that the structural and distributional effects of the tax are likely to be fully as important as its effects on over-all investment volume under most conditions.

## DISCUSSION

B. U. Ratchford: The theoretical foundations of our corporate income tax have long needed a thorough and radical re-examination. In his paper Dr. Colm has made an able and penetrating beginning on that formidable task. His has indeed been a tough job and I am sure that he is acutely aware of the fact that he can hardly do more than delineate the issues in a thirty-minute paper. To discuss the problem in ten minutes is also a tough assignment.

As I see it, the analysis of this problem is made much more difficult by two broad considerations. First, the economic effects of the tax, if not its very nature, change greatly with changing conditions, as Dr. Colm has intimated. Second, large and powerful groups in our economy see the tax in vastly different ways and, either through misunderstanding or by deliberate intention, advocate its use for various and often conflicting purposes.

Let us look at the first consideration. In his paper Dr. Colm suggested that the tax is like a giraffe. If another zoological comparison is in order, I would like to suggest that it may be more like a chameleon. Its incidence and its economic effects are likely to change greatly depending upon the conditions under which it is levied. Dr. Colm has stated his belief that after a certain critical level of rates is reached, the tax is shifted in large part. I would agree, although I do not believe that the change is as abrupt as he intimates. He has also pointed out that the demand in the market and the presence of governmental controls are important factors governing shifting. Along the same line, the nature and extent of competition in the market will have a great effect on shifting.

In view of its different and ever changing economic effects, it is not surprising that different economic groups should take radically different views of the tax. Since few of us think of the tax as affecting us directly and immediately, most of us feel free to advocate its more liberal use in lieu of taxes which would hit us directly. Farmers have few corporations; so they are heartily in favor of taxing them more heavily. Labor groups frequently advocate higher taxes on corporate profits while at the same time demanding that those profits be used to pay higher wages and more liberal pensions. They never think of higher corporate taxes as causing lower wages; yet if taxes were reduced they would probably expect to capture some part of the savings in the form of higher wages. In periods of depression, some fiscal theorists advocate greater use of corporate taxes in order to equalize incomes, reduce savings, and raise mass purchasing power. Logically it would seem that this line of reasoning would indicate lower corporate taxes in periods when the control of inflation is the dominant problem; then, however, it is argued that higher taxes are necessary in order to induce the lower income groups to accept higher direct and excise taxes.

These are only a few of the many and diverse uses which are advocated

for the corporate income tax. They may indicate why this tax may be all things to all people. Except, of course, to the businessman immediately concerned; to him high corporate taxes are positive proof that the government is following a hostile and discriminatory policy toward organized business.

All of the above arguments are based quite directly upon the assumption that taxes on corporate profits are not shifted to consumers. If it is assumed that they are shifted to consumers, those arguments become meaningless and the corporate income tax becomes a multiple-stage sales tax. As Dr. Colm has well said, this is no place to attempt a comprehensive consideration of incidence. I have an uneasy suspicion, however, that a considerable portion of the tax has been shifted in the past fifteen years. This suspicion rests upon a consideration of the factors mentioned a moment ago as governing shifting. First, the level of rates has been high—probably above that critical level which Dr. Colm regards as permitting shifting. Second, there has been much government control. In two periods we had price controls, and in each of those, one of the factors considered in setting prices was the level of profits by producers. Third, we have been subjected to strong inflationary forces during much of the period. The strong demand growing out of those forces has permitted shifting. Fourth, partly as a result of the inflation, there has not been the extent and quality of competition in the market which would prevent shifting.

Dr. Colm arrived at his conclusion that a part of the tax has been shifted through his examination of the behavior of the ratio of profits before and after taxes to gross receipts. If, instead, we look at the ratio of profits after taxes to net worth, we see that the evidence of shifting is considerably greater. The large sample of leading manufacturing corporations covered by the National City *Bank Letter* shows that the drastic increases in tax rates during World War II did little more than hold the rate of profits to a level not far below that of the twenties. As Dr. Colm indicates, a large part of that effect was probably caused by direct controls rather than by tax rates. In 1947 and 1948, the rate of profits was considerably higher than in the twenties, although effective tax rates were more than twice as high. In 1952, the rate of profits, despite the prolonged steel strike, was about equal to that of 1929, although the tax rate was almost five times as high. Even if we grant that there was probably a considerable lag in the adjustment of the value of fixed assets, these figures would indicate that a very substantial part of the tax was shifted.

In discussing the corporation income tax as an aid in controlling inflation and in the allocation of resources, Dr. Colm's principal argument seems to be that it is necessary in order to make certain other measures politically feasible. While this point has a certain validity, we should recognize the fact that it is strictly political, reflecting certain political attitudes which rest partly upon misunderstandings and oversimplified generalizations. They depend upon the assumption that no substantial part of the tax is shifted and upon the assumption that the final incidence of corporation taxes is progressive according to some reasonable standard of ability to pay. I have indicated my doubts about the validity of the first assumption and Dr. Colm

states that the ability-to-pay principle is not directly applicable here. This well illustrates the problems that can be caused by widespread misconceptions about a tax.

Finally, while politically they may be necessary as an adjunct to wage controls in a period of inflation, high corporate taxes have an economic effect which tends to defeat such controls. High corporate taxes, and especially excess profits taxes, permit the employer to hoard scarce types of labor and to grant wage increases freely with relatively little cost to himself. In other words, the employer's inducement to hold down costs is weakened here as at all other points.

If we are to accept high corporate taxes as a permanent part of our tax system, as we must, then perhaps we should attempt to draw such consolation as we can from this fact. One crumb of comfort may be found in the fact that these taxes constitute an element of stability for the economy as a whole. Corporate profits are highly volatile and any substantial recession will bring a sharp drop in the tax revenues they produce. This will tend to force the government to resort to deficit financing, which, if properly managed, can provide a stimulus to the economy. At the same time the impact upon the corporation of falling profit margins is reduced somewhat by the fact that the government is absorbing a part of the reduction.

A striking example of how volatile corporate taxes are and also of the problems which may result from erratic fluctuations is afforded by the fiscal year 1953. The collections of corporate income taxes for that year were more than 3 billion dollars below the budget estimate given in January, 1953. That was caused very largely by the steel strike of 1952. The result was that we had the largest peacetime deficit in our history at a time when we had full employment and capacity production. It may be that the steel strike caused more problems for the federal treasury than for any of the steel companies involved.

Mabel Newcomer: I have never found the role of discussant so difficult. In this highly controversial field I find myself in practically complete agreement with everything that Mr. Butters has said. And since I assume that the purpose of discussion is the advancement of knowledge rather than the entertainment of the audience, I am not going to disagree for the sake of argument. About all that I can do under the circumstances is to emphasize the more important findings and point out what seem to me to be minor omissions.

The value of Mr. Butters' paper lies in the fact that his findings are based on careful factual studies and that, further, he has reached some clear-cut and important conclusions concerning the impact of the tax structure on business and the investor without indulging in overstatement. This is particularly important in a field where there have been so many charges and countercharges that the average individual is hopelessly confused.

Mr. Butters has packed so much in such a small space that it takes some rereading of his paper to get the full implications of it. The important conclusions are, however, first, that taxes, even at present levels, are only

one of many factors affecting business decisions and that their dampening effect on business expansion has been comparatively small. And, second, that they affect the manner in which business is conducted more than they affect the amount and kind of business activity. I shall come back to this latter point again.

With regard to omissions—or perhaps this is just a matter of emphasis—Mr. Butters notes, as though it were a fortunate accident, that one of the reasons for the minimization of the effects of the tax system on business incentive and expansion is that tax increases have been made at times when business expectations were good. And he suggests that continuation of such a tax level in periods of recession might bring very different results. This is true. But the reason for taxes of the current magnitude is, of course, the size of government spending. And government spending has been an important factor in creating business income. The federal government is far and away the largest customer that business has and can be counted on to pay its bills besides. This is in large part responsible for the long-continued business expansion. Even though the government recaptures a substantial part of the profits through its tax system, on balance, business may be the gainer, and the motive for further expansion remains. The only question is as to the manner in which the government finances its spending. To what degree does inflation encourage business expansion, and at what point does the alternative of taxation check business expansion less than accelerated inflation? All this is implicit in Mr. Butters' discussion, and perhaps it is too elementary a point to be mentioned in such a meeting as this. But in less informed circles I find it needs frequent repetition.

One other minor point concerns the stimulus of the tax system toward corporate saving. Mr. Butters has discussed this in some detail in the case of the closely-held corporation. It has been my impression, however, that this is not limited to closely-held corporations; that even our large corporations have expanded from their own past earnings, as they have to an exceptional degree in recent years, partly because such action has made it possible for shareholders to increase their investments in the corporations without paying personal income taxes on the sums thus reinvested. This may not have resulted from any urging on the part of individual shareholders; but the tax does reduce shareholder resistance to the accumulation of earned surpluses, and the corporation executives have been in a position to take advantage of this. However, I am aware that it is one thing to demonstrate that the big corporations have expanded from earnings to an exceptional degree and quite another to credit the tax system for any part in such expansion. And it may well be that the studies on which Mr. Butters' paper is based have not produced any clear evidence to support this.

The conclusion that taxes influence methods of doing business rather than the volume of business points again to the importance of paying more attention to the form of taxation and less to the general tax level. The old principle of "innocuity," which economists of past generations included in their tests of a sound tax system, has necessarily been scrapped. Government

spending of today's proportions cannot be negative in its impact on the economy, no matter how such spending is financed.

Mr. Butters' discussion indicates that the capital gains provisions and percentage depletion have encouraged risk-taking in certain areas. And the high rates of corporation income and excess profits taxes stimulate research as well as wasteful spending. This raises two questions. First, are the areas favored those that need encouragement most in terms of the health of the total economy? And, second, do they justify deviation from the principle of ability to pay? It is increasingly apparent that ability to pay must sometimes play a secondary role to that of keeping the economy on an even keel, although in most instances, fortunately, the two principles are entirely compatible. I am not convinced, however, that the present loopholes were designed with this in mind, or that for the most part they achieve it accidentally. But I can imagine loopholes—of course we would not call them that—that are in the nature of genuine tax incentives. And I should like to see Mr. Butters go on from here and outline the changes that his studies indicate might prove to be effective tax incentives.

Meanwhile, I have only praise for Mr. Butters' paper and for the numerous careful studies that have accumulated the evidence on which his conclusions are based. I only wish it might be made required reading for congressmen and some of their protesting constituents.

James K. Hall: Professor Lintner has presented an appraisal of the effects of corporate taxation on the incentives of corporate managements to make new investments; also on the supply of funds to finance new investments from both internal and external sources. His analysis is directed, first, to the effects of the corporate tax on investment on the assumption that the tax is shifted; second, to the effects of the corporate tax on investment when absorbed; and, third, to the effects of the corporate tax on investment volume resulting from restrictions on the ability of corporations to self-finance capital outlays under circumstances of tax absorption.

Professor Lintner views as a somewhat neglected question the analysis of the investment effects of the tax under the assumption that the tax is shifted. In this I concur. Its neglect until recently has rested upon the rather universal conviction that the corporate tax, in its short-run money burden, has been non-shiftable because it has had no direct relationship to production costs. Recently, however, it has been increasingly contended that the corporate tax to some significant extent is shiftable and is shifted. The fragmentary statistical and other evidence, including the rather unconvincing statements of some business executives, is far from conclusive. It is perhaps best described as an "intuitive" view which has not yet found any satisfactory confirmation. If the money burden of the corporate tax is in fact shifted, in whole or in part, a causal relationship between the tax and the increase in price and/or decrease in factor costs must follow. In this connection it may be observed that a tax-induced liberality in corporate costs of advertising or the traveling expenses of salesmen and the like, resulting from an increase

in the rates of the corporate tax or the adoption of an excess profits tax, is not a case of tax shifting. Further, we do not regard a sudden major increase in aggregate demand—war occasioned—with a concurrent lag in supply and factor prices and the resultant increases in prices and in pre- and posttax corporate profits as an instance of the shifting of a corporate tax. This increase in corporate profits presumably would occur in the absence of a corporate tax. Further, though such price increases may restore a former posttax corporate profit position, this fact of itself establishes no necessary causal relationship between the tax or the tax rate increase and the increase in prices. On the other hand, in an economy in inflation when aggregate demand tends to outrun aggregate supply and when oligopolistic corporations customarily price below their optimum levels, such corporate managements may be induced to translate a corporate tax rate increase through to prices. An inflationary economy, in the absence of controls, clearly offers the best opportunity for some short-run shifting of the corporate tax.

In his discussion of incidence of the corporate tax, Lintner indicates that his statistical findings strongly suggest that the tax, in large part, is not shifted. Yet he is concerned by Professor Musgrave's assumptions regarding the distribution of the corporate tax as found in his study of the "Distribution of Tax Payments by Income Groups: A Case Study for 1948" (*National Tax Journal*, March, 1951, page 32), whereby, for purposes of the analysis, one-third of the corporate tax was assumed to be shifted to consumers and one-eighth to wage-earners. These assumptions by Musgrave apparently are not to be taken as representing necessarily his own view regarding the distribution of the corporate tax burden or as resting on any persuasive empirical evidence, for he states that "the shifting assumption with regard to the corporation tax is the point which, above all others, is in need of verification and debate" (R. A. Musgrave and L. France, "Rejoinder to Dr. Tucker," *National Tax Journal*, March, 1952, page 24). I fear, however, that Lintner may be unduly impressed with Musgrave's arbitrary assignment of some 45 per cent of the corporate tax to consumers and to wage-earners; also by certain statistical findings of Terborgh, for he concludes that "there seems to be little doubt that there actually is a significant amount of shifting of the corporate income tax, even in the short run." From this view a dissent must be entered. This is not to say that the corporate tax in the short run cannot, under certain circumstances, at certain times, and by certain corporations, undergo some shifting. However, such shifting, confined as it must be to corporations earning net profits, is believed to be sporadic, limited in its corporate application, and relatively unimportant as a cost consideration affecting consumer or factor prices, public service corporations excluded.

In the analysis of the investment effects of a corporate tax rate increase under the assumption of full forward shifting, the impairment of investment incentives resulting from output curtailment and unutilized plant capacities is regarded by Lintner as being as great, if not greater, than if the tax increase is absorbed. This impairment is primarily of incentives rather than of the availability of investment funds. It may be observed that the consequences of the forward shifting of the tax possibly are understated because the tax-

generated increase in prices pyramids and because unit production costs rise with the underutilization of capacity. Further, working capital requirements would not decrease in proportion to reduced outputs, because inventory unit costs would rise. As has been pointed out, particularization in these and other respects depends on the elasticities of demand and the cost schedules of the corporately-produced commodities. Investmentwise, a shifted corporate tax would reduce the relative demand for new investment funds because existing plant capacities would be more or less redundant.

In dealing with the investment effects of a non-shifted increase in tax, it has been noted that the outputs of the taxed corporations would not be directly affected; hence current operating levels would be maintained. However, with posttax profits reduced by the full amount of the tax rate increase, earnings available to the corporation for earned surplus and for dividends will be correspondingly diminished. The high stability and continuity in dividend payments will cause the major impact of the reduced corporate profits to fall on retained earnings. (This conclusion appears to be warranted for the so-called "public" corporations but is questionable with respect to private, or close, corporations.) According to Lintner, empirical evidence suggests that retained earnings will be reduced by some six-sevenths and dividends by one-seventh of the amount of the reduced posttax earnings. With the stream of accretions to earned surplus undergoing a relatively major reduction and with some diminution of dividends, the internal capabilities of the corporation to finance new investments will be impaired, as will the corporation's attraction for external funds. Investment incentives and investment fund availabilities are thus adversely affected. However, the magnitude and consequences of this directional shift are incapable of precise determination because of insufficient knowledge of the relative elasticity of the investment-demand schedule. Lintner is of the opinion that the elasticity of the investment schedule, taxwise, is relatively low, particularly if business conditions are generally favorable. With this I agree. The importance of the maintenance and the improvement of market positions, the existence of growth momentums, and the like are factors tending to establish a low order of investment schedule elasticity for corporate managements. Further, the relative profitability of new investments is only one consideration, among many others, which influences the decisions of corporate managements to undertake new investments. Consequently, as Lintner observes, the extent of the reduction in investment volume directly caused by the tax effect on incentives may be substantially overstated if there is full imputation of the posttax reduction of corporate profits. This is further emphasized when corporations on occasion, under circumstances of maintaining or improving market positions or in reducing risks of loss or even for reasons of prestige, may make new investments even though the new investments may be negative profitwise.

However, certain limitations appear with respect to the general conclusion that the investment-demand schedule for new investments has low elasticity in general. At some point, presently unknown, tax rate increases may reach an order of magnitude as a result of which their effects on investment incen-

tives may be heavily repressive, with the investment-demand schedule displaying high elasticity consequently. In addition, the low elasticity of the investment-demand schedule in prosperous times with business expectations optimistic may be expected to show a much higher order of elasticity in a contracting economy with the business outlook pessimistic. In this respect, because of the tax effects on investment incentives, I should anticipate a somewhat greater change in relative investment volume than does Lintner, apparently.

The principal effect of an absorbed corporate income tax in an expanding economy with favorable business expectations is, apparently, to affect more adversely the supply of available funds for new investments than incentives to invest. In a contracting economy the situation likely will be reversed, with investment incentives undergoing relatively greater impairment than the supply of available funds.

The restriction on capital supply resulting from an unshifted corporate tax falls with special severity on the small corporation which may not have access to external funds or which is opposed to equity dilution as a matter of owner-manager corporate policy and which, consequently, is dependent upon post-tax retained earnings for corporate expansion. The importance numerically of the small private corporation is indicated by the fact that some 80 per cent of our some 400,000 corporate enterprises have corporate assets of less than $250,000. The large public corporations which are in a position to obtain external funds either through debt or equity flotations represent probably about 1 per cent of total corporate undertakings. It is a matter of no small importance that an unshifted corporate tax is an instrument of discrimination against the small corporation in its program of growth and development.

Lintner has added to our understanding of the short-run effects of corporate taxation on investment incentives and capital supply. He is to be commended for his competent analysis of a difficult problem.

# THE THEORY OF INTERNATIONAL TRADE IN A WORLD OF TRADE BARRIERS AND CONTROLS AND OF VARIEGATED NATIONAL ECONOMIC SYSTEMS

## THE RELEVANCE OF THE CLASSICAL THEORY UNDER MODERN CONDITIONS

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### I

When the President of our Association asked me to prepare a paper on the relevance of classical trade theory, he explained what he had in mind by quoting from Professor Jacob Viner's introduction to his collected essays, *International Economics* (The Free Press, Glencoe, Illinois), published in 1951. There, after pointing out that the old classical theory was "sufficiently elastic . . . to absorb without friction all the Keynesian contributions," Professor Viner goes on to say that "it would be a mistake . . . to claim for it, even in its improved modernized form, adequacy as a theory to guide policy in the present-day world. The world has changed greatly, and is now a world of planned economies, of state trading, of substantially arbitrary and inflexible national price structures. . . . The classical theory is not directly relevant for such a world, and it may be that for such a world there is and can be no relevant *general* theory." (*Op. cit.*, page 16. Italics in original.)

The tone of this passage is unusually mournful and apologetic, and quite atypical, I dare say, for its distinguished author. After perusal of these gloomy reflections it is refreshing to read Professor Viner's famous Brazilian lectures—*International Trade and Economic Development* (same publishers, 1952)—which were delivered before but published after the essay volume. In these lectures he propounds and applies straightforward classical economics—classical theory, it is true, in the broad sense, Vinerian classics—with no quarters asked or given. I, too, shall use the words classical theory in the broadest neoclassical sense, for any narrowing of the concept would be unfair, arbitary, and useless for our purpose.

It has been often observed that the old classical theory of international trade has stood up surprisingly well compared with other parts

of the classical economics. It has survived the marginalist and the Keynesian revolutions with little damage to its basic structure. In fact, trade theory has undergone a gradual evolution from Hume, Ricardo, Mill, via Marshall and Edgeworth to Viner, Ohlin, James Meade, and Paul Samuelson, to mention only a few.

It seems to me quite clear, that despite the author's protestations, B. Ohlin's important contribution does not fall outside the main current of classical thought. This could be demonstrated in detail, but will hardly be questioned today, not even, I venture to believe, by the eminent author of *Interregional and International Trade* himself.

Classical trade theory falls into three distinct though interrelated parts: first the theory of the balance-of-payments mechanism; second, the nonmonetary equilibrium theory of the international division of labor; the comparative-cost doctrine with all its modern ramifications, merging into the mathematical restatements by Yntema and Mosak; many factor models à la Ohlin; the theory of the influence of trade on factor prices and functional income distribution; and, third—closely connected with the second—is the theory of the welfare aspects of trade, the free trade doctrine and the exceptions to the free trade rule, the theory of arguments for protection, "optimum tariff" theory, etc.

It would be a mistake in my opinion, to emphasize the distinction between classical and neoclassical theory. It is true the gradual improvement in the theory—its development into a more refined and, let us hope, more realistic structure—has not proceeded at a uniform pace; but it would be arbitrary and hardly useful for our purposes to draw a dividing line somewhere, calling what went before classical and what came after neoclassical or modern—at least so it would seem when looking back over the history from the present vantage point. It is understandable, however, that whenever a significant advance was made, enthusiasm led the innovators (or their followers) to speak of a revolution and a new era.

It will perhaps be objected that under this broad definition there is virtually no trade theory left that is not classical. My answer to that objection is that I do not, in fact, know of any rival theory. I know of many criticisms of certain parts of classical theory and especially of the free trade conclusion drawn from it by many of its adherents, but there does not exist, to my knowledge, a radically different, systematically stated, comprehensive rival trade theory.

## II

I shall now discuss the relevance of the theory of the balance-of-payments mechanism and then turn to the other two branches of the classical doctrine. A tremendous amount of work has been done over the

years on the theory of the mechanism which determines exchange rates and maintains or restores equilibrium in the international accounts. The impetus for improvements came mostly from major disturbances in this field. The dollar shortage of late, the impact of the Great Depression and of inflation and reparations after World War I on exchange rates and balances of payments, the financial disturbances resulting from the Napoleonic Wars—each of these episodes and others in between have stimulated a wave of discussion and each time the received theory was re-examined, restated, and the analysis improved and pushed forward.

Today's theory is much superior to, and greatly refined compared with, early nineteenth-century theory. It is much better integrated with the general theory of money, business cycles, and employment on the one hand and with pure equilibrium theory on the other. The theory of the mechanism uses all the modern theoretical devices. It is replete with elasticities, multipliers and propensities, with accelerators and stability conditions, income effects, price effects and substitution effects and all the rest. But many of the basic principles can be traced back to the early nineteenth century.

Take the Ohlin "revolution" or the "modern" transfer theory in Carl Iversen's celebrated monograph. Ohlin stressed the role of income effects in the transfer or balance-of-payments mechanism against Keynes who at that time represented the orthodox theory emphasizing price effects. (Ohlin did not use the word income, but buying power or expenditure, a gross concept as compared with net income—gross, that is to say, of proceeds from foreign loans or gold sales abroad.) But we know now that income effects have been considered by some of the early classical writers—by Ricardo himself and by Bastable and Wicksell. It was, however, only in modern times that income and price effects have been fairly well integrated—most comprehensively and systematically by James Meade.[1]

Keynesian writers have added the "employment effect" (or, better, effects of income changes due to employment changes[2]) and have given us the theory of the international employment multiplier as developed by Metzler and Machlup. It certainly is a good thing to have a theory of the employment implications of the balance-of-payments mechanism,

[1] In his monograph on *The Balance of Payments* (1951). See, also, S. A. Alexander's interesting paper, "Effects of a Devaluation on a Trade Balance" (in *International Monetary Fund Staff Paper*, Vol. II, No. 2, April, 1952), which offers an alternative presentation of the interaction of price and income and employment effects but not a substantially different theory despite the author's claims.

[2] Strictly speaking, we ought to distinguish three types of income or expenditure changes: those due to the transfer of reparations, the receipt of loans, and proceeds from gold exports; those due to changes in the terms of trade engendered by the transfer mechanism ("transfer burden"); those due to consequent employment changes.

but the relevance for our modern full employment world of the Machlup-Metzler models in which prices are assumed to be stable and general unemployment to exist throughout the whole process of adaptation must be very seriously doubted. For this theory is "depression economics" in the strongest sense of the term. The full employment version of multiplier theory (as worked out by Meade) which stresses the other type of income effects is much more appropriate under present-day conditions. But taking the theory as a whole and assuming that it is properly applied, each version for its proper conditions, I do not see how its relevance can be doubted even in the modern world.

True, prices and, especially, wages are more rigid than they used to be, at least in the downward direction. This, together with the modern horror of unemployment, rules out deflation[3] as a matter of practical policy. But this still leaves changes in the exchange rates as a method of equilibrating the balance of payments and relative wages can be changed despite downward rigidity, through selective upward adjustments.

Nor are full employment policies implemented by means of monetary and fiscal measures incompatible with the balance-of-payments mechanism as described by modern theory, provided exchange rates are flexible. Only if these policies become so extreme as to resist any change in real income (or real expenditure) do they become inconsistent, not only with the classical, but with any other method of eliminating a balance-of-payments deficit. If, for example, in case of a currency depreciation designed to wipe out a deficit, money wages are adjusted upward in order to maintain real wages, government expenditures are increased so as to guarantee their real level, and investment expenditures are correspondingly raised, depreciation cannot have its desired effect. But surely this does not make a theory irrelevant which, if properly applied, will warn us of the outcome.

True, many countries prefer nowadays to deal with balance-of-payments deficits by applying direct controls to imports (and possibly exports)—substituting government action, coercion, and restriction (licenses, quotas, state trading, etc.) for the market mechanism. If these policies are pushed far enough, the market theory of the mechanism becomes irrelevant and inapplicable. But another branch of trade theory—the welfare theory of international trade—should be able to tell whether this substitution of government fiat for the price mechanism is

[3] There is still a little room for an attenuated kind of deflation—called "disinflation," if we mean by that not anti-inflation but a mild kind of deflation which reduces prices only as much as can be done without creating unemployment by necessitating a fall in the wage level. This is sometimes possible, if in the course of an inflation prices have run ahead of wages.

conducive or not to maximizing national income and welfare. On this branch of theory, more below.

There remains one serious technical defect of current theorizing on the mechanism. Almost all that has been written is almost completely competitive theory. The theory operates with shapes and shifts of demand and supply curves of one currency in terms of another; these curves are derived from demand and supply curves of exports and imports; the latter are deduced from demand and supply curves of consumers and producers which can be traced back to utility and production functions. All that, as well as the major part of general equilibrium theory, is entirely competitive—and this in a world abounding with monopolies, oligopolies, monopolistic competition, and other imperfections and impurities of competition.

I submit, however, that at least in the area with which we are concerned this is not so damaging as it sounds. The currency markets themselves (foreign exchange markets) are still everywhere completely competitive (except where they are monopolized by public exchange control boards). What is often not competitive is the market of individual export and import commodities. This makes the theoretical derivation of the demand and supply curve of currencies more difficult. The elasticities of the latter curves can no longer be neatly expressed in terms of elasticities of demand and supply curves of imports and exports. This does not mean, however, that the currency curves are not dependent on demand and supply (cost) conditions of exports and imports. It only means that the derivation is more complicated and that proper attention must be given to the market structure of individual export and import articles. The theoretical picture is always messed up if competition is replaced by all sorts of monopolistic impurities.

But there is, I believe, no reason to expect that the stability of the market for foreign exchange is impaired thereby. On the contrary, it is likely to be strengthened. Let me explain by an example. When Great Britain depreciated in 1949, the dollar value of whisky exports might have suffered if the supply had been competitive and the elasticity of demand less than one. Thus a situation might (I do not say it actually would) have arisen where the aggregate dollar value of exports would have fallen as a result of depreciation and the balance of payments would be in unstable equilibrium (deteriorating instead of improving after depreciation). Since the whisky price was monopolistically managed, the dollar price of whisky remained unchanged and the supply of dollars from exports after depreciation was larger than it would have been under competition. (See H. Brems, "Foreign Exchange Rates and Monopolistic Competition," *Economic Journal,* June, 1953, pages 289-299, for further discussions of this problem.)

In this strangely untouched field there is much room for fruitful analysis. But I do not foresee a major upset of the theory of the mechanism resulting from the introduction of monopolistic complications in the market of individual exports and imports, at least so long as currency markets themselves remain competitive.

Let me summarize: The world has indeed changed greatly, as Viner says, but the change in the direction of comprehensive central planning has not been drastic enough to make the classical theory of the mechanism inapplicable. Moreover, since Viner wrote that gloomy passage in 1951 further changes have occurred—this time in the other direction, away from central planning; thus again widening the scope for the application of the modern theory of the mechanism.

## III

I now come to the nonmonetary equilibrium theory and its welfare implications. The classical theory has been often criticized (Ohlin and Myrdal have been especially outspoken) for mixing explanatory and normative arguments. If it is a vice to utilize theory for welfare judgments and policy recommendations, then the criticism is indeed justified and applies to neoclassical economics just as much as to early nineteenth-century classical theory. I confess I cannot see any valid objection against using theory for welfare and policy purposes, provided it is well understood that value judgments have to be introduced and the metascientific or at least metaeconomic value postulates are clearly formulated.[4]

I think it is true that the comparative-cost doctrine was formulated with a view of deriving policy recommendations (free trade conclusions). Why is the structure of international trade and exchange what it is? Why do countries specialize in a certain way? The classical answer is that each country exports what it can produce cheaper than others—proximately in terms of money; but since money cost and money prices reflect (at least as a rule) "real" cost (in the sense of real opportunity cost or some other sense), they specialize also along the line of real comparative advantage. This answer leads easily to the conclusion that trade minimizes cost or maximizes output—a conclusion which, if not a welfare proposition itself, almost imperceptibly tends to turn into one.

[4] This is precisely what Ohlin says. But he also pleads, on the very last page of his book (*Interregional and International Trade*, p. 590), for separation of "objective theory" and questions of "desirability" which are "tinged with normative considerations." This certainly is excellent advice, but that it is not always easy to follow Ohlin demonstrates—involuntarily and unconsciously—by arguing at an early stage of his "objective analysis" (p. 40), in thoroughly classical fashion, that interregional trade permits an increase in total output. Interestingly enough, he fails to state the implied value judgments, nor does he make the necessary theoretical assumptions fully explicit, possibly because he thinks that they are self-evident.

While, thus, the comparative cost theory is a powerful tool for deriving welfare propositions, it is not a very useful device for predicting the range of commodities which a given country will export and import. For a concrete operational answer to that last question, we have to turn to the Heckscher-Ohlin type of theory, to economic geography and location theory—theories which explain the pattern of trade in terms of supply of factors of production (in the broadest sense of the term), conditions of production (including social milieu, etc.), geographic distance and transportation cost, both natural and artificial ones.

These theories are more concrete; they are on a lower level of abstraction than the classical theory in the norrower sense (comparative cost and its modern elaborations). I do not think anyone can question the relevance of these theories, even under modern conditions, although nowadays much attention has to be given to artificial and policy factors (tariffs, subsidies, and the subtler kinds of interventions) determining international location of production and division of labor.

These theories are, however, in no way incompatible with the classical theory in the narrower sense; i.e., the comparative-cost theory. It is on these more abstract structures whose relevance and applicability under realistic conditions—nineteenth-century or modern—is more difficult to visualize and more open to doubt, that I should like to add a few more remarks. Let me again quote from Viner; for if he, the most sympathetic and knowledgeable apprasier, finds fault with the classical doctrine, its defects must indeed be serious and far-reaching:

> To-day, prices made rigid by Government regulation and private monopoly, or made artificial by subsidies, ceilings, rationing, restrictions on output [etc.] are familiar phenomena. [Under these conditions] the logical foundations for the routine application of the free trade argument are absent. . . . The free trade logic . . . instead of calling for *laissez faire* . . . calls for careful and systematic offsetting of the artificialities of the price structure by subsidies or restraints on exports. . . . [Until the implications of these distortions and artificialities have been fully worked out] in the light of the classical theory . . . commercial policy can have no rational philosophy and free trade becomes almost as irrational as random interference with trade. (*Op. cit.*, page 12.)

This was written in 1951. Since then, as I said before, the world has again changed a great deal, this time in the other direction. The "artificialities" have been substantially reduced in many countries—in the U.K., in Germany, and elsewhere. But there can be no question that the prewar, let alone the predepression, position has not been restored. The world is still full of rigidities, artificialities, and monopolies, and it requires superhuman optimism to rely on countervailing power to eradicate the consequences of these conditions.

This passage does not sound any more hopeful or less resigned than the eariler one. But Professor Viner does not really question the relevance of classical theory. He specifically says that the implications

for trade policy of the artificialities which he mentions should be explored "in the light of classical trade theory." I would put it stronger: with the aid of classical trade theory.

It is essential, however, that we distinguish between classical trade theory on the one hand and the free trade conclusions derived from the theory on the other hand. The free trade conclusions were never put forward in entirely unqualified form, not even by the early classical writers. Only under certain assumptions—roughly, free competition and absence of external economies and diseconomies—and given certain value judgments (which modern welfare economics has tried to make fully explicit without complete success so far) does the free trade conclusion follow as a general rule. The word "general" should be emphasized for, if those conditions—free competition, etc.—are not fulfilled, free trade may be even more desirable or else may be undesirable, depending on circumstances which can be specified.

It is true that over the years the exceptions to the free trade rule have become more numerous. In comparison with nineteenth-century writers, most of us now recognize a wider range of conditions under which laissez faire in trade matters is not the optimal policy. The confidence that the exceptions are negligible is gone and has been replaced in the minds of some very able economists by almost the opposite conviction: the exceptions have become the rule and vice versa. But this change, this loss of faith, has, or could have, taken place without questioning the validity of the classical trade theory.

Marshall's dictum—often repeated in various formulations—that economic theory should be regarded as an engine of enquiry rather than as a collection of set conclusions is more and more taken seriously. And this analytical engine is capable of turning out results that are at variance with earlier convictions if appropriate assumptions are fed into the machine; namely, external economies, rigidities, monopolies, and other artificialities.

In this manner, it seems to me, a very good case can be made for the relevance of classical trade theory even under most "modern" conditions. This does not mean, however, that the application of the classical theories, though formally competent, will guarantee wise policy recommendations. By feeding unrealistic, exaggerated factual assumptions (concerning external economies, rigidities, etc.) and perverse value judgments into the theoretical machine, unwise, pernicious, and perverse policy conclusions can be deduced from a valid theory by logically valid procedures. The more powerful the machine, the greater the potential damage done by misapplication.

The classical trade theory has, in fact, been increasingly used, and greatly misused, for justifying protectionist policies. I am thinking of the misuse of the venerable classical terms-of-trade argument for pro-

tection—optimum tariff theory in the new dress—and the equally old infant-industry argument for protection. The same is true of the more modern unemployment argument for import restrictions which flows from the assumption of rigid wages and prices.

My contention that those arguments whose validity in the abstract is not open to doubt have been greatly misused is based on the conviction that the classical laissez faire, i.e., free trade doctrine (as distinguished from the classical analytical engine), is by no means so irrational and irrelevant as Professor Viner in a momentary lapse into despair seems to believe. Even under modern conditions a good case can be made for the proposition that free trade is the best *general* policy. Let me briefly indicate the reasons for this belief:

1. The degree to which competition has been eliminated is being greatly exaggerated, for what is needed is not literally perfect or pure competition. The existence of Chamberlainian monopolistic competition is probably sufficient to ensure workable competition.

2. Many existing rigidities and monopolies depend essentially on protection and would disappear or be whittled down to innocuous proportions under free trade.

3. The same holds true of many artificialities due to governmental policies. In many cases, price control and price pegging, allocation and rationing, as well as government sponsored and supported monopolistic marketing schemes could not endure, because they could not be enforced or would become prohibitively expensive if imports from abroad were not tightly controlled.

4. Arguments for protection are often contradictory; e.g., the terms-of-trade argument on the one hand and unemployment argument on the other. From these conflicts result difficulties of theoretical reconciliation and practically insuperable clashes of interest which make political and administrative implementation of a rational policy virtually impossible.

5. Anyone who has followed recent experiments in planning (I stress "recent" because policy has become bolder and more unrestrained) in developed, but especially in undeveloped, countries must be struck by the tremendous obstacles to an even moderately rational policy. The older classical economists have undoubtedly exaggerated the precision and smoothness of the market mechanism, even under favorable nineteenth-century conditions.

But the gulf which separates ideal planning of the Lerner and Lange type from actual economic policy as practiced in large parts of the world today is as wide as the Pacific Ocean compared with the discrepancies between the idealizations of the free trade economists and actual free trade even under modern conditions.

# FORCES OF DISEQUILIBRIUM AND WORLD DISORDER[1]

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The optimistic view of the requirements for world order is that the balance of payments will equilibrate itself, provided that the deficit countries "halt inflation and adjust the exchanges" and that the surplus countries, chiefly the United States, do not hamper the adjustment either by serious depression or by tightening restrictions on imports. (G. Haberler, *International Social Science Bulletin,* Spring, 1951, page 93.) These conditions may be regarded as essentially classical medicine with perhaps added emphasis on the income factor in the express requirement that the United States must avoid serious depression. Do these conditions offer a durable basis for world order? My answer is on the pessimistic side.

The cornerstone of international equilibrium according to classical theory is flexible prices, with a presumption of high elasticities. Mobility of resources within the nation provides balance between nations. The distinctive feature of this conception is that external order depends exclusively on internal adjustment. The shocks and dislocations of expanding world markets are to be absorbed by instability and mobility in the home market.

In a world burgeoning with national plans and dominated by the modern forces of socialization, it is doubtful if the rest of the world can be geared to the American leviathan through the price mechanism alone. In such a world, the classical medicine is relevant but inadequate. Prices can point the way to structural changes, but a durable basis for world order seems to call for external as well as internal adjustment.

The assumptions underlying my discussion are that the income elasticity of world demand for American goods is higher than unity and may rise and that foreign investment is quite limited. Because of changes in taste, technology, and the distribution of rising incomes, we may face a shift of world demand toward American goods. The total foreign investment of the world appears to be roughly 3 billion dollars annually, of which American foreign investment is only about 1 billion dollars net. The problem is whether, under these condition, the price mechanism can carry the full burden of adjustment. I hope to show in support of my position that internal development in the United States hampers

[1] I am obliged to Calvin B. Hoover and J. J. Spengler for a critical reading of this paper and for suggestions.

the foreign trade adjustment via the price mechanism and that, even in the nineteenth century, international order depended on external as well as internal adjustment.

*America's Import Disability.* Now that the United States must play the role once played by Britain, the character of our economy is of crucial importance to the problem of world order. The level of American imports can and should be increased. My argument is only that this adjustment is hampered by the internal disparities between the low-wage import industries and the high-wage export industries. In order to be brief, I have had to combine those branches of agriculture and the nondurable goods which are most exposed to potential competition from imports and what I have to say is more true of agriculture than of the nondurable goods industries.

The presumption of high price elasticities in foreign trade depends on the internal adjustment of supply in the importing country. In the United States, the incidence of the foreign trade displacement is concentrated in the labor intensive branches of agriculture and the older nondurable goods industries. The problem is to transfer resources fast enough to accommodate both additional imports and the internal technological displacement in the same areas. If imports were the only displacement, it would be comparatively simple to shift 300,000 people out of agriculture annually, and this would permit a dramatic increase in agricultural imports. Owing, however, to increased productivity, a far greater number than this—about 10 million people net—migrated off farms in the period 1940-48 while the smaller farm labor force increased production enough to raise domestic consumption and exports and to reduce the relative importance of imports. Farm workers displaced by the tractor need to be reabsorbed before imports, which would displace additional farm workers, can be substantially increased.[2] The total transfer of resources, that is, the supply adjustment required to provide high import elasticities, is many times greater than appears from the volume of imports to be accommodated. This is because the potential foreign trade adjustment is superimposed on top of migration and internal technological displacement in the same direction; namely, from agriculture and the labor intensive to the capital intensive branches of home industry.

There seems to be little doubt that the great bulk of America's potential imports (with respect to price) are agricultural products and nondurable goods. As a general rule, America's comparative advantage lies increasingly in capital intensive industries which are, also, the growth industries, while our comparative disadvantage is increasingly

[2] I have borrowed a few sentences from my forthcoming study of *American Imports* which is to be published by the Twentieth Century Fund.

concentrated in the labor intensive branches of agriculture and older nondurable goods industries which suffer from relatively stagnant markets. The transfer problem is an acute one because, with some exceptions, the import industries are already under heavy pressure from the forces of internal growth. Where the market for imported products is expanding, as with watches and certain electrical products, imports can be absorbed by the growing market. These are the exception, however, and not the rule. The discussion which follows refers only to those potential imports which face relatively stagnant markets and must compete against relatively low-wage home industries.

America's import problem is owing to underemployment, particularly in southern agriculture, which has been reduced but is still large enough that agriculture is not likely to require the workers who would be displaced by increased imports. To the extent that imports create additional agricultural exports, these can generally be provided by existing underemployed resources in tobacco, cotton, and certain other export crops. Moreover, agricultural exports are already distended by foreign aid and American consumers will not buy much more food and fiber simply because aid is reduced. The long-term trend, as indicated by the decline of agricultural exports relative to total exports, seems to be in the direction of reducing our comparative advantage in agriculture, generally. It is possible that this trend has been interrupted by mechanization and that agriculture, generally, may not remain a labor intensive occupation. Such a development would only make the adjustment problem more acute in the older nondurable goods industries where factor prices are relatively low. In any event, the requirement for high price elasticities is a rate of internal growth which will more nearly equalize factor prices at home.

Direct technological displacement, which has taken a heavy toll of leading American imports, poses essentially the same problem of internal adjustment as does the mechanization of agriculture. We feed and clothe ourselves, doctor, travel, and scrub by using more capital and relatively less imported natural resources. It is quite clear that, in the past generation, the increase in imports owing to technological change has been in no way commensurate with the displacement. This requires explanation, for even if technological displacement is not distributed at random over the world, the internal market should provide some equilibrating adjustments. In a more perfect factor market, development of capital intensive synthetic industries would raise marginal opportunity costs in the labor intensive home industries and, as a result, additional labor intensive imports would tend to be substituted for home production.

The trouble arises because, in a growing economy, relative prices are

not proportional to marginal opportunity costs. Factor prices in a growing economy are not in equilibrium. The adjustment of supply, by the migration out of agriculture, for example, extends over generations. Relative low wages and profits in the relatively stagnant industries, while necessary to contract employment, enable these industries to compete more effectively against imports during the transition while prices are depressed. In the same way, relatively high wages and profits in the growth industries, while necessary to attract resources, hamper the expansion of exports from the growth industries while prices are above the long-term equilibrium level. If factor prices were equalized between the relatively stagnant labor intensive industries and the more progressive capital intensive industries, we would import more labor intensive goods and export more capital intensive goods. (Parenthetically, this disparity may explain why American exports of capital intensive durable goods are so much less than we would expect a priori and why American exports of labor intensive tobacco and textiles are larger than we would expect.)

The supply adjustment that is prerequisite to the expansion of foreign trade is seriously hampered by the rigidities associated with administered prices and labor unions. It is a striking circumstance that the low-wage, import industries are highly competitive with flexible prices and incomes while the high-wage, growth industries are monopolistic with relatively rigid prices and wages. In effect, the classical prescription, under modern conditions, means that the competitive branches of home industry will bear the major burden of adjustment. Underemployment in the import industries will not reduce factor prices appreciably in the growth industries. On the other hand, as we have seen since the end of the war, rising demand for products of the growth industries is dissipated, in part, by wage-price increases in the growth industries before factor costs are equalized between the growth and the stagnant home industries.

The old cliché that free trade at home has made the American economy flexible and productive and that free foreign trade will make it that much more progressive and dynamic, neglects the fact that foreign competition is highly concentrated in the competitive industries which already suffer from a tendency toward chronic underemployment. More specifically, Piquet's estimates (*Aid, Trade and the Tariff*) indicate that free trade would increase imports of cotton and tobacco by about as much as it would increase imports of steel. Does anyone suppose that lower farm incomes and lower wages in nondurable goods industries will accelerate the expansion of steel, aluminum, electric power, and automobiles by reducing wage costs through the labor market?

The heart of the price elasticity question is the long-run adjustment

of supply. Theory shows that forces work in a given direction; it cannot show that equality of factor costs will be realized even in the long run. If the new dislocations in each increment of time should be greater than the market can accommodate within that period, the disparities will exacerbate rather than abate. The illusion of long-run equilibrium is created by abstracting from the forces of growth and cyclical disturbance each step of the way and by taking the requisite adjustments one at a time.

Farm prices have fallen relatively since 1947 and absolutely since early 1950. A still further decline is in store if foreign aid is reduced and, if we adjust to freer trade and pull out the support prices, the drop might be precipitate.

It would be interesting to know how many economists believe that the expansion of nonfarm employment would be accelerated today by such a drop in farm prices even if it were spread gradually over the long run. Baldly stated, the case for high elasticities rests on the assumption that it will. I believe, rather, that the historical record supports the view that the shift of resources out of the relatively stagnant, low-income industries depends chiefly on the availability of jobs and that these are not increased by still greater disparities in factor prices than have prevailed most of the time. In 1947, for example, when farm prices were relatively highest, 600,000 people net migrated from farms. Generally speaking, migration is highest in prosperity when the disparities are least.

Optimism regarding foreign trade elasticities rests on the assumption that lower factor prices in the import industries will accelerate the shift of resources no matter what the disparities in factor prices are to begin with. An alternative view is that the rate of growth is limited by the familiar problems of bottlenecks, factor allocation, and uncertainty rather than by an absolute shortage of resources. The long-run adjustment must allow for the fact that underemployment in southern agriculture is still great because only a minor part of farms have tractors and that irrigation has been scarcely begun. Unless the transfer of resources is accelerated as a result of increased disparities in factor prices, the chief effect of increased competition from imports will be to redistribute income away from producers in the import industries. The optimistic view of elasticities abstracts completely from the role of uncertainty in hampering acceleration of investment and neglects the possible effect of divergent rates of growth on aggregate consumption.

Evidence of the long-run inflexibility is the persistent disparity between farm and nonfarm income and the North-South wage differential. The second is, in part, a product of the first, because underemployment and low wages in the South are the product of the relative excess of

farm labor and the relative shortage of capital. These inequalities in the home market account for the inelasticities which hamper the foreign trade adjustment. Underemployed labor in the South is drawing industry to that area, and this competition has been felt particularly by New England where the older nondurable goods industries were originally located. In other words, the New England textile industry has been subject to the same displacement that would result from increased imports, but owing to unequal factor costs at home, the textile industry shifted south instead of to Britain and Japan. Similarly, the shoe industry has been decentralized. The elasticity of New England supply which would have expanded foreign trade was absorbed by domestic trade, and we have so little of the one because we have so much of the other. Unless we assume that no limit to the rate of growth is imposed by the transfer problem, we must conclude that the import adjustment competes with internal growth for the market's limited capacity to shift resources in time.

*The Import Adjustment Is Marginal.* Moreover, the import adjustment is marginal in the sense that internal growth has a natural priority over foreign trade (assuming a comparative advantage in the growth industries). The external adjustment comes last because relatively low factor prices in the relatively stagnant import industries provide protection from foreign competition.

This means that any failure to realize maximum potential internal growth also means that resources are not drawn out of the relatively stagnant home industries against which imports must compete. Thus a depression or even a decline in the rate of internal growth may leave underemployed resources in the import industries with a resultant relative decline in factor prices.

This is offered, tentatively, as a hypothesis to explain the empirical fact that American imports are characteristically more unstable than domestic production of directly competing products. There is a systematic relationship in which the amplitude of fluctuations in aggregate imports is two or more times greater than fluctuations in domestic production and even a leveling off in the growth of output is accompanied by an absolute fall in imports. Other factors are also involved in the comparison of aggregates which cannot be covered here, but it appears clear that the relative instability of imports competing directly with home production is greater than that of noncompeting imports for which specialization is complete. The internal price-cost structure rather than the income factor, therefore, seems to explain the difference.

It may not be enough to avoid serious depression. An adequate foreign trade adjustment probably requires rapid and sustained internal growth. The implication of my argument is that the American economy

is in better condition to absorb imports now than in the thirties. Another decade or two of rapid growth may go a long way toward eliminating underemployment.

The foreign trade elasticities of those countries which have a comparative disadvantage in the growth industries present quite a different problem because the adjustment does not require transfer of resources out of industries which are already under pressure from internal development. A further word of qualification: in broadest terms, the wage structure of industrial countries is somewhat similar, since the pattern of growth is similar. But there is no reason to assume that the growth differentials are identical and, indeed, they must differ if free market forces are to shift resources into the same industries in one country that are shifted out of in another.

Everything considered, it seems to me that the flexibility which remains in the world today is fairly impressive and I am moderately optimistic concerning the over-all adjustment to both internal and external change. My moderate elasticity pessimism as to foreign trade is expressed by the old story of the boy who was bet that he could not eat a whole watermelon and, to assure himself that he could, ran home and ate one before attempting to win the the wager. America's disability with respect to the foreign trade melon is that our capacity for adaptation is so nearly exhausted by adaptation to the ever greater quantity and variety of melons produced at home. America's peculiar disability is a corollary of its internal position, the dynamics of growth, and the fact that our comparative advantage lies increasingly in the growth industries.

Time does not permit detailed comparison of the relative magnitude of Britain's internal adjustment to free trade following the Cobden Treaty with the internal adjustment of the United States during the past generation when tariffs have been drastically reduced but imports have declined relative to domestic production. Only one basic measure of flexibility may be cited. Free trade produced no absolute depopulation of the British countryside. Britain's rural population, both in the north and south, was higher in 1911 than seventy years earlier, in 1841. In the United States, on the contrary, farm population was reduced by one-third in half as many years and this despite protection of agriculture and the distention of exports by government aid. Moreover, the British experience seems to confirm the interpretation of internal mobility, which holds that the overriding consideration affecting the rate of migration is the availability of nonfarm jobs rather than the relative prosperity or depression of agriculture. (Cairncross, *Home and Foreign Investment, 1870-1913,* pages 77 and 216.)

I want to illustrate now the importance of external as well as internal

adjustment by reference, first, to development of the South in relation to the rest of the nation and, second, by the example of internationalism in the nineteenth century. By external adjustment, I refer to migration and capital movements.

*The Microcosm.* The microcosm of the South presents, of course, no payments problem, but it helps to explain why in a developing economy external factor movements may be required to avoid great disparities in factor prices. The development of the thirteen states from the Potomac to the Rio Grande illuminates the magnitude of the transfers that are required and suggests the limits of internal adjustment. Generations of free trade within the United States had failed to equalize factor costs between North and South. Capital shortage, underemployment, and relatively low incomes seemed endemic to the South. In the last two decades, 1929-50, however, the South has become more like the nation.

Three aspects of this adjustment in the microcosm are relevant to the question of internal flexibility and external trade. The first is the out-migration of 4 million people from the South, 3 million of whom moved in the single decade of the forties. A second vital factor was the inflow of capital, scientific knowledge, technical skill, and managerial know-how. The most important factor bringing in capital appears to have been the available labor supply and the great wartime expansion of demand. Relatively low labor costs had previously failed to attract sufficient capital to equalize factor prices between North and South. The inflow of capital, in substantial part, was not rationed to indigenous borrowers by the rate of interest. Important sources were the federal government and direct investment in branch plants by national corporations. In the case of insurance companies the interest rate may have played a role.

A third factor which contributed toward equalization of factor prices between the South and the rest of the nation was internal flexibility. In two decades, agricultural employment in the South was reduced by 40 per cent at the same time that the nation as a whole reduced its dependence on agricultural imports. Only half of this reduction in farm employment was absorbed by expansion of manufacturing in the South. Most striking, perhaps, is that manufacturing and agricultural employment together are now only slightly greater than either government or trade and services. In manufacturing, there was a sharp decline in the relative importance of textiles. Much the greatest expansion of income was owing to income originating in government. Federal government expenditures increased tenfold.

In his presidential address before the Southern Economic Association last month my colleague, Professor Ratchford, from whom I borrowed these salient facts, summed up the cardinal flexibilities of this intra-

national integration: "Cotton is moving West, cattle are moving East, negroes are moving North and Yankees are moving South. . . . The South is growing richer, whiter, more urbanized." And more socialized—in a phrase, more like the nation.

Patently, many factors, including education and free trade with the rest of the nation, were responsible for this prodigious reduction in southern underemployment which has, however, not yet been entirely eliminated.

Suppose that in the next generation the rate of over-all national expansion were to level off somewhat, that the inflow of capital to the South stopped and out-migration of 2 or 3 million people per decade ceased, that government in no way interfered with the free southern market for goods and factors including the end of federal gaints-in-aid to the states, but that free trade with the nation or even with the world was maintained. What would be the effect? How far would free trade and internal adjustment substitute for external factor movements?

*External Adjustment in the Nineteenth Century.* In theory, the classical system depended exclusively on internal adjustment. In practice, however, the durability of international order under free trade in the nineteenth century depended on immigration and foreign investment as well as on the British open market.

"Migration makes for better factor allocation," wrote Joseph J. Spengler (in *A Survey of Contemporary Economics,* Volume II, 1952, page 123). In a cosmopolitan world which dedicated its energies to production, new hands were welcomed for the contribution they could make to profits and national wealth. Opportunity for work was unlimited and those who were dispossessed by internal adjustment through the balance-of-payments discipline were free to seek more favorable terms in other lands. Even in Britain, which called the tune by her great expansion of industry, the labor displaced in the countryside, by competition from American agriculture, found a cure for underemployment by moving to the New World.

The safety valve provided by immigration from the harsh dictates of international equilibrium was indispensable to the classical compromise with nationalism which collapsed when this avenue of escape was closed. Nation was thereby pitted against nation instead of individual against individual. E. H. Carr has said: "In 1923 the United States, which for three generations had been known to the oppressed everywhere as the land of great open spaces and unlimited opportunity, closed the door to immigration; and this act more than any other was the symbol of a world grown static and stereotyped." (*Conditions of the Peace,* page 109.)

The closing of national frontiers was a harbinger of the rise of labor

power and the socialization of the nation. When almost without a murmur the capitalist class of all great industrial nations accepted social legislation so clearly contrary to their immediate interest, the sun of laissez faire was setting and the rise of national plans could not be far behind.

A second cornerstone of the nineteenth-century order particularly vital to the multilateral pattern of trade was foreign investment. Short-term borrowing mitigated the impact of balance-of-payments disequilibria on national employment. But capital movements were more than a balancing item. A substantial part of international trade was not barter trade. The rate of growth, the commodity composition, the geographical pattern, and the multilateral character of trade were all decisively influenced by foreign investment.

Internationalism requires national discipline. In the expansion and contraction of trade, the gold standard countries had to march in step and the "Old Lady of Threadneedle Street" called the pace. Ambitions for national development and power were ruled by day-to-day decisions which focused primarily on safeguarding the integrity of the exchanges. Nonetheless, authority was centralized in London, which became the final arbiter over the destiny of nations at the periphery.

"Money does not manage itself," wrote Walter Bagehot, "and Lombard Street has much money to manage." Control was autocratic and the system was esoteric. While British probity was noteworthy, there was no appeal from private decisions which would now be regarded as intolerable interference with national plans. There was, indeed, a harmony of interests. Rather than invest in housing and public amenities at home, British capitalists built foreign railways to haul wheat which improved the terms of trade and made the bread of British workers cheaper. A counterpart of the adjustment was that British engineers and displaced farmers moved abroad to build the roads and raise the wheat to ship over the rails made by British workers, and so there was less need for housing at home. Real wages rose at home, not only because food was cheaper, but also because labor was scarcer.

The nineteenth-century order depended on foreign investment. Britain provided the liquidity for multilateral trade. Nowhere is it more evident that the old sanctions have been stood on their head than in the modern attitude of debtor nations toward the lender, which seems to be that "foreign credits should sustain the internal status quo." (N. S. Buchanan in *A Survey of Contemporary Economics,* Volume II, pages 324-325.)

Under the new nationalism, the sanctity of contract in international investment has been irretrievably destroyed and a new framework for the debtor-creditor relationship must eventually emerge.

In the nineteenth century, the price mechanism was rarely called on to support the entire adjustment to free trade via internal flexibility. I want to emphasize briefly, in the particular case of Britain, the important role played by external adjustments in mitigating the internal dislocations and smoothing the shift of resources.

Two aspects of the magnitude and character of these transfers stand out. (1) Net emigration from Britain in the four decades ending 1911 was only about 25 per cent less than the total internal migration from country to town (England and Wales) when agriculture was meeting severe foreign competition. (2) In the Victorian age, Britain poured about 40 per cent of her total investments into foreign countries and by 1914 about one-tenth of her national income was derived from foreign investments. If today the United States devoted the same share of her resources to foreign investments, according to Cairncross, "the entire Marshall Plan would have to be carried out twice a year." Emigration and foreign investment rose and fell together both by decades and in prosperity and depression. He states, also: "Moreover, the countries which borrowed most in London tended to be the countries which received most emigrants from Britain." (*Op. cit.*, pages 3-4, 76, 209.)

In sum, free trade and sound currency, by themselves, did not provide an adequate basis for world order. From nineteenth-century experience, we may say that classical theory was relevant and adequate as a policy only so long as its postulate of exclusive internal adjustment was not realized.

*Relevance of Theory.* The equality of relative prices between nations may become so distorted by national planning that comparative costs of internationally traded goods may become spurious. "And it may be," according to Professor Viner, "that for such a world there is and can be no relevant general theory." (*International Economics,* page 16.) While I take Viner's stricture on this score seriously, there seems to be some basis for a less gloomy outlook. As Elliott has pointed out, the dominating position of the United States can provide a normative reference for a wide range of products. International trade has never involved the fine degree of specialization which characterizes domestic trade. The great bulk of international trade is concentrated in a rather modest number of commodities. Less underemployment and more stability may help to reduce the disparities in internal factor prices which, in the past, have produced bogus comparative costs. The economic loss from misemployment by planning must be balanced against the loss from secular underemployment and cyclical unemployment in the past.

I have tried to think of an example to illustrate my point regarding misemployment and underemployment. The American farm program is widely condemned because its effect on international trade and to-

bacco seems to be one of the worst cases. Surpluses have been sold abroad at 50 per cent of the domestic support price. Moreover, the disposal of surplus tobacco in Germany, for example, displaced a potential market of Turkey and Greece at a time the United States was providing aid to all these countries. This is inadmissable as a policy and difficult to defend as an expedient.

Nonetheless, an over-all evaluation ought to compare this distortion with earlier decades when factor returns in southern agriculture were far below those of the nation. Today, factor returns are more nearly equal to those on comparable resources in other areas. Consider, also, the injury to foreign tobacco growers. Were Greece and Turkey more seriously injured by the limited dumping in selected markets or by decades of free market prices when factor costs in American tobacco were a fraction of comparable costs in other areas? This is not intended as a defense of the support price relationships within agriculture, but it does seem relevant to the basic question of internal balance and foreign trade.

The income effect of full employment has expanded the potential role of international trade and, although its contribution to human welfare is less than it might be, in the main, the basic adjustments seem to be in the right direction and prices are pointing the way.

In a world of growth, conflict between national development and international order is inevitable. The problem is which shall give way—the nation or the outside world. The nineteenth-century resolution of this conflict was supported by the salutary myth that economics is separate from politics. But the compromise with nationalism was always an uneasy one and it has been virtually destroyed by the rise of the welfare state. The forces of disequilibrium under modern conditions lie in the aspirations, the ambitions, and the plans of socialized nations. Socialization of the nation has, as a logical consequence, the nationalization of the social service state. Bismarck had this profound insight. When the state was dedicated to protection of property, Marx could write that the workers of the world had no fatherland. But this was a major misconception of history. In the modern welfare state, the workers have gained a fatherland and now have much to lose.

The constructive task of this generation is to find a new compromise with nationalism—a compromise which will accommodate national planning but which will impose the discipline essential to mutually beneficial trade. Such a compromise must require internal flexibility but will also provide for external adjustment. The fundamental problem is not only that the superstructure of world order has been damaged by depression and war, but that the foundation has been sapped by socialization and nationalism. In such a world, the piecemeal approach,

as in the sterling bloc and European Payments Union, seems to offer more promise of durable reconstruction than general multilateral agreements shot full of escape clauses.

The price mechanism can point the way to structural change, but it will prove a better servant if it is not overloaded. Orderly foreign investment requires a *modus vivendi* between debtor and creditor and, toward this end, convertibility is the salutary first step. But the magnitude and nature of disorder are such that convertibility conflicts with the rule of nondiscrimination. The world has greatly changed and the real choice may lie between the second best of convertibility with systematic discrimination and the third best of nonconvertibility with a bogus multilateralism.

## DISCUSSION

JOHN H. ADLER: The two papers which we just heard reveal substantial differences in the outlook of the authors. Professor Haberler concludes that the classical theory of international trade and its logical conclusion of the general superiority of free trade have stood up well under the onslaught of imperfect competition, rigidities originating from private entrepreneurial decisions, government interference with market forces, and, above all, the modern concern with income flows. He also points out that the simple forms of the classical gown, though ornamented nowadays with curlicues of propensities and multipliers, is still worn at all occasions, by friend and foe alike, simply because no other garb covering all limbs has been designed as yet.

Professor Humphrey, on the other hand, finds that the manly garb, the *toga virilis* of the classics, shows some awkward holes, and that on occasions its color scheme clashes violently with the backdrop of domestic economic policies. He proceeds to demonstrate by way of an example that domestic adjustment in the United States to increased foreign competition is difficult, or may not materialize at all, because of low supply elasticities in some import industries.

Professor Haberler has answered Mr. Humphrey's plaint beforehand by his admission that "the older classical economists have undoubtedly exaggerated the precision and smoothness of the market mechanism." (I trust Professor Humphrey would agree.) It is the discussant's privilege, not to say thankless task, to find the middle ground of agreement between the two speakers and to see where he can go from there.

A convenient point of departure is Professor Haberler's definition of classical theory. If the ranks of the classicists extend from Hume to Samuelson, what about Machlup and Metzler, who showed that under certain conditions a process of adjustment through income changes alone was possible? And what about Harrod and Balogh? I am sure Professor Haberler would want to draw the line somewhere.

There is no question in my mind that the essential elements of the classical theory stand undamaged and that the classics' explanation of the balance-of-payments mechanism represents a major intellectual achievement. But having said that, why not add that the income adjustment aspects and the growth aspects—particularly those external economies and diseconomies which Professor Haberler rules out—though mentioned by several of the classics, have not been part of the main trend of doctrine and certainly not a major argument in the classic set of normative conclusions. Certainly the achievement of the classics is not made smaller by the admission that the explicit treatment of income adjustments, by Machlup and Metzler and others, has added to our understanding of the mechanism of balance-of-payments adjustment. The neglect, or the playing-down, of income effects was not

a major shortcoming at a time when general economic theory was not primarily concerned with income flows and the level of employment, simply because recurrent declines in the level of industrial activity and employment had not the social and political importance which they have nowadays.

However, it does not follow from the emphasis on the income effects of balance-of-payments adjustments that the process of adjustment along classical lines has become impossible. All that has happened is that in analysis, as well as in normative advice, the economist has to be more circumspect and be aware of the income dimension of his problem; and he may as well admit—as Professor Haberler does—that free international competition and, we may add, free movements of capital and free exchange rates, may not be the optimum solution under certain circumstances. This is particularly true when we try to reconcile the objective of the best allocation of resources with the objective of rapid growth of underdeveloped countries. There all kinds of conceptual complications arise: the uncertainty of the terms of trade, an undesirable income distribution, an awkward constellation of income and price elasticities, and the vexing problem of external economies. I believe with Professor Haberler that under those conditions the simple general rules of the classics cannot be applied indiscriminately and that special and specific rules may have to be developed for particular cases.

I presume that Professor Humphrey agrees with what I have said so far, since he has provided an example for the inapplicability of the classic rules in his reference to the impact of increased imports on the economy of the South. I find myself, however, in the unfortunate position of having to part with him halfway. If I understand him correctly, his argument can be rephrased as follows: A lowering of import duties on cotton textiles and agricultural products, particularly cotton (?), will not result in increased imports, because the economy of the South will meet the increased foreign competition through lower prices and wages. The result will be a diminished demand for products of the growth industries of the other parts of the country and a general lowering of income, or, at least, a decline in the rate of growth of the economy as a whole and thus a decline in the demand for imports. This example of the inappropriateness of the classical mechanism of adjustment leaves me, I must confess, unimpressed. True, the classical mechanism of adjustment relies heavily on high price elasticities of the demand for imports, and these high elasticities imply a high supply elasticity in the import industries. But what about the vent of the price elasticity of demand for the total supply of textiles both foreign and domestic? And, given some growth of the total demand, even with a modest income elasticity, what about a gradual increase in the share of imported textiles in the American market? It may well be that the initial effect of lower tariffs is a lowering of wages, profits, and income in the southern textile industry and not an immediate increase in imports. It may even happen that secondary effects of lower incomes in the South will be felt in the northern growth industries. But unless we stipulate some further effects of such a process of price and income adjustment on the rate of investment or the rate of savings, the ultimate outcome cannot be in doubt. The very fact that the growth industries already draw man-

power away from the stagnant sectors of the economy should make the process of adjustment smoother and not, as Professor Humphrey states, more difficult. The absolute size of the adjustment is the same, whether we superimpose 300,000 agricultural and textile workers on the 10 million drawn out of agriculture or not.

There is no conflict between classical trade theory and Mr. Humphrey's case because the process of adjustment could not immediately start. What matters is whether economic forces move in the direction of adjustment or away from it. Decline in money income for the economy as a whole, and of real income in some sectors, is clearly part of the process of adjustment. But the classical contention is only that the long-run advantages of a lowering of real cost and an increase in real income outweigh the short-run disadvantages of declining money income or, in a dynamic process, a slower rise in money income. I am convinced that it applies without modification to the American economy.

George A. Elliott: In spite of apparent differences in conclusions, our two papers are at least partly complementary. I can develop no serious dispute with what Professor Haberler has said. It follows from it that the theory of international trade is not a complete theory—no living theory is—and perhaps he did not emphasize this point. Mention has been made of the difficulties which arise from rigidities, external economies and diseconomies, and interference with the working of the price system; but he has made important contributions elsewhere to resolving some of these. With respect to secular problems of development, too, while the theory is not complete, progress has been made. Professor Viner's direct application of the theory in this field has been noted. In addition, the economic historians have used the theory to reduce to routines some of the historical uniqueness of international economic development; the statisticians, too, have been at work on quantitative material; and some tentative use has been made of highly abstract models to explore the implications of international differences in rates of growth.

It is with secular problems that Professor Humphrey has specially concerned himself. His main thesis is very interesting; but it depends, in part, on details of the economy of the United States which I am not qualified to discuss. His paper deals also, however, with more general matters including the classical theory of international trade and nineteenth-century economic development.

It is true that the classical theory had only two speeds for mobility—stop and go—and that the theory of international trade, so-called, assumed that mobility existed between industries but not between areas. However, the theories of domestic trade, international trade, and market price taken together allowed some analysis of quite a wide range of flexibilities and inflexibilities. When resources are specialized and immobile, trade may be very important though the terms of trade may fluctuate widely. Secular considerations, though, were not always emphasized. (Our Chairman by introducing secular changes has been able to warn us, for example, of the dangers and inflexibilities that await a nation which allows its population

to grow up to the gains obtained from narrow specialization under favorable trading conditions.) Professor Humphrey's conclusion that resources will move more rapidly to appropriate uses when they are mobile both industrially and geographically is consistent, it would appear, with classical theory, as are his conclusions with respect to changes in duties on various exports. The classical theory invoked relative inflation or deflation to adjust aggregate exports and imports; where international trade forms a very small fraction of total trade it is too much to expect that the effects, on income, of changes in duties can be distinguished from the effects of other changes. Moreover, if there is considerable flexibility as between imports either in production or use as the paper suggests, even less income adjustment would be required.

I agree with Professor Humphrey that some price changes may hinder rather than assist the movement of resources to appropriate uses; and that price changes may not be sufficient, by themselves, to apportion resources and income acceptably. Resources are not mobile during general depressions even though agricultural prices fall most. However, long-run price relationships are not unimportant; and changes in relative prices in prosperous times may affect the use of resources.

In the second place, price incentives work most effectively in a suitable environment. Poverty, malnutrition, ignorance, and disease tend to diminish rather than increase mobility. But is it not possible, for moderately wealthy countries, at least, to relieve poverty and prevent malnutrition, ignorance, and disease without obscuring the working of the price system or interfering with international trade? It is difficult to convince other countries that the interferences are part of a general program that does not damage them; and when technological changes are rapid, widespread interference with prices makes it difficult to be sure even that the price motive is operating in the appropriate direction. Technological changes in agriculture in Canada, incidentally, have paralleled those in the United States. Between 1941 and 1951 the number of persons gainfully employed in agriculture was reduced by nearly a quarter and is now about the same as it was in 1911 when the prairie provinces were being settled. Meanwhile, in recent years investment in agricultural machinery has been not far short of investment in machinery in all manufacturing industries combined, where the number of gainfully occupied has increased by 12 per cent. In agriculture, acreage and output have increased and output per person has increased very rapidly. In what past year, then, may it now be assumed that price relationships were most appropriate to encourage rapid movement of resources in the right direction? Indeed, have resources been moving into agriculture in Canada or out of it? In any event there is evidence of considerable flexibility in both countries in prosperous times.

Professor Humphrey suggests that it is natural for imports to decline more than competing domestic products; and so it is if margins in international trade are larger or more rigid than in domestic trade. But does policy have no effect? Or are the effects of specific duties, variable quotas and tariff quotas,

and requests for voluntary restriction of exports included in the routine responses to changes in income?

The harmonies of late nineteenth-century development resulted in part from the international movement of resources; but were these movements not associated with British free trade? Investment tending to increase the production of food and raw materials seemed more attractive than investment in sultans' palaces, partly because food and raw materials could be imported into Britain free of duty while sultans' palaces could not be imported at all. What was true of food and foreign investment in the nineteenth century seems in some cases to be true in the twentieth, even with respect to manufactures. One of the few manufactured products which the United States has admitted free of duty or other import restrictions consistently over a long period is standard newsprint paper. This is also Canada's most important manufactured export. United States direct investment in Canada is larger in wood and paper manufacturing than in any of the other eight groups of manufacturing industries reported by the Dominion Bureau of Statistics. Is this really an accident?

The British decision to adopt free trade was not an easy one. In the short run, at least, it sacrificed British and colonial agriculture to the broader interests presumably of the nation, almost certainly of the world. Political difficulties and humanitarian scruples were lessened by the extension of the franchise and the fact that many British landowners were well to do.

It is always difficult to decide what lessons, if any, the past holds for the present—but the industry disrupted in this case was agriculture, and Britain was then leading the world in technological progress.

# ECONOMIC DOCTRINES IMPLIED IN THE REPORTS OF THE UNITED NATIONS AND OF THE INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT ON UNDERDEVELOPED COUNTRIES

## ECONOMIC DOCTRINES REFLECTED IN U.N. REPORTS[1]

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The vast literature on economic topics produced by the U.N. covers virtually all current economic problems, and the views expressed by these reports reflect in large measure the divergent economic philosophies of hundreds of technicians and members of special committees responsible for their preparation. For every generalization regarding the economic doctrines to be found in these reports exceptions can undoubtedly be cited. Hence, in attempting to generalize from this vast store of documentation, the reviewer is treading on dangerous ground nearly every step of the way.

Economic doctrines and philosophies may be revealed in several different ways. First, they may be implicit in the problem with which the analyst is asked to deal. To a considerable degree, the authors of the special U.N. reports such as *National and International Measures for Full Employment* and *Measures for Economic Development of Underdeveloped Areas* were given specific tasks and terms of reference which implied a particular economic philosophy. The authors of these reports were not asked whether they believed in special governmental actions for speeding up the rate of economic development or for maintaining full employment. Rather, they were asked to formulate a plan of governmental action to accomplish a stated objective. On the other hand the secretariats of the various U.N. agencies are in principle supposed to be neutral and objective. Nevertheless, secretariats must be responsive to the interests of the official delegates to the U.N. organs employing them, the vast majority of which come from nations with interventionist policies.

Economic doctrines may also be implied in the choice of facts which are presented and analyzed. Thus there is a tendency in U.N. reports to

[1] This paper is concerned with the reports issued by the United Nations itself and not with those of independent agencies such as the International Bank and Monetary Fund.

be concerned with measures of aggregates, such as indexes of production, GNP, capital-output ratios, foreign trade, balances of payments and terms of trade, rather than with the theory of value, the dynamics of markets, and cost-price relationships. There is an implicit assumption that movements of these aggregates provide a measure of progress toward national economic goals and hence establish the proper criteria for governmental policy and planning. This is not to question the desirability of statistical aggregates or of the commendable urge to improve these measures. There are, however, some economists (including Professors Viner and Frankel)[2] who question the identification of these measures with economic welfare and progress, and still more who question their appropriateness as guides for governmental planners.

Unsatisfactory conditions as determined by absolute or comparative levels of aggregates give rise to problems which require solution. These problems are in the first instance national problems and national policies are to be designed to meet them.

However, in studying U.N. reports such as the annual *World Economic Report* and the regional reports of the Economic Commission for Europe, the Economic Commission for Asia and the Far East and the Economic Commission for Latin America, one cannot help being impressed with the regional or group orientations. We find in U.N. reports a number of special groupings of countries whose problems are indicated by combining national aggregates and comparing these aggregates with those found in other nations or groupings of nations. Thus we have underdeveloped areas and geographical subdivisions of underdeveloped areas. Industrial nations have their regional groupings, such as the dollar area and the EPU area. Finally we have the sterling area, which cuts across geographical categories and those based on stages of economic development. Now statistical manipulations and comparisons of economic aggregates for each of these groupings give rise to problems whose solution requires national or international action. These problems include relatively low terms of trade or fluctuating terms of trade, low per capita income, inadequate capital for development, regional disequilibrium, and inadequate levels of foreign exchange reserves.

There is in all of this generation of problems by groupings certain implicit and explicit judgments regarding political responsibility for action. Unemployment requires national action in the country experiencing unemployment; national action by the country whose policies are allegedly responsible for the creation of unemployment beyond its

[2] Jacob Viner, *International Trade and Economic Development* (Glencoe, Illinois: The Free Press, 1952); S. Herbert Frankel, *Some Aspects of International Economic Development* (International Finance Section, Princeton, 1952).

borders; and international action which usually requires a monetary contribution from the United States. Economic development—which has become something of a natural and self-evident right of every nation whose per capita income is below a certain level—requires appropriate national and international action. Thus according to one U.N. report, underdeveloped countries require 10 billion dollars annually in order to raise their national incomes by 2 per cent per year (*Measures for the Economic Development of Underdeveloped Countries,* May, 1951, page 79). Another U.N. report shows that per capita income in Latin America has been increasing at a rate of 2.5 per cent annually over the period 1935-51, but it asserts that the required rate of annual growth is 4 per cent.[3] The required rate of growth in this case is based on the principle that international tensions can be reduced by a reduction in the disparity between per capita incomes in developed and underdeveloped countries.

National and international policies are to be determined, not with reference to a world trading community and the mutual economic benefits of free commercial exchange, but rather with reference to national and regional or special group problems. Thus the underdeveloped countries are advised to control their trade so as to promote "balanced growth" and to improve their terms of trade, while the United States is exhorted to remove trade barriers in order to promote economic development, eliminate the dollar shortage, and promote world stability and full employment. International capital movements should not take place in accordance with the profit motive but should be channeled by national and international agencies in accordance with carefully devised plans for the solution of their problems. For example, in the United Nations report entitled *Measures for Economic Development of Underdeveloped Countries,* nothing is said in the recommendations to the underdeveloped countries about improving their climate for private foreign investment, but a great deal is said about the need for foreign public loans and grants and for government planning and controls. The classical idea that there is something mutually beneficial to be derived from the free movement of goods and capital throughout the world economy is somehow inconsistent with a world dominated by problems of balanced growth, structural disequilibrium, dollar shortage, and unsatisfactory terms of trade for certain groups of countries.

I want now to turn to a brief discussion of the theoretical approaches involved in the treatment of three problems which have been dealt with extensively in U.N. reports; namely, the problem of international equi-

[3] See "Preliminary Study of the Techniques of Programming Economic Development" (mimeo.) (U.N. Economic Commission for Latin America, March, 1953), Chap. 2.

librium; the promotion of economic development; and full employment and economic stability.

In discussing the economic theories reflected in the U.N. documents, it should be kept in mind that we are not dealing with a consistent body of doctrine or with logically consistent models of the operation of the world economy. The approach to these problems is generally an eclectic one, usually representing a compromise of views among several authors. Such generalizations as can be made will refer to the relative emphasis which is given to certain theoretical approaches found in the U.N. reports.

### *The Problem of International Equilibrium*

It was a foregone conclusion of the postwar planners that international equilibrium would not be achieved and maintained by the automatic correctives of classical economics. It was assumed that equilibrium would require high levels of employment and reasonable economic stability in the leading industrial nations. In fact, for the first few postwar years an expected U.S. depression was regarded as the major obstacle to the maintenance of international equilibrium once the transition from wartime to peacetime conditions had been made.

Just as there was a tendency for economists in the prewar period to ignore the external conditions for balance-of-payments equilibrium for the individual country, in the postwar period the external factors appear to have overshadowed the internal. Discussions of the problem of equilibrium to be found in U.N. reports have laid major stress on structural changes in world demand and supply conditions, upon shifts in terms of trade, and upon changes in debtor-creditor relations as the basic causes of a persistent or chronic world disequilibrium. The classical prescriptions for adjustment to changed external conditions by such orthodox measures as monetary deflation or even devaluation have been regarded as either inadequate or harmful to the social welfare. It is frequently argued that these old-fashioned remedies will interfere with certain national goals such as the maintenance of full employment, the realization of investment goals, the maintenance of a certain standard of living for the workers, or the development of national economies along certain lines. Disequilibrium is regarded as a far lesser evil than the consequences of internal adjustments which might restore equilibrium. Hence adjustment must come from the outside or through long-term planning of the domestic economy—if at all. This position is reinforced by a tendency to regard the price elasticities of most internationally traded commodities as being less than unity. Thus the principle of comparative advantage is considered to be rendered obsolete by the doctrine of the terms of trade, a subject to which I shall turn later on.

While the U.N. reports recognize that monetary and fiscal measures can play a significant role in correcting disequilibrium, internal measures for curbing total demand are regarded as being limited by the necessity of maintaining full employment. Hence these measures may not be sufficient to achieve equilibrium without structural adjustments which take time, planning, economic controls, and (foreign) capital. Changes in exchange rates are generally not regarded as a desirable means of adjustment. In the case of industrial exports, the supplies of which are fairly elastic, devaluation is believed likely to reduce foreign exchange earnings because of the inelasticities of foreign demand. In the case of raw material exports, devaluation simply increases the profits of the local producers at the expense of higher prices paid for imports by the local consumers or, alternatively, results in an expansion of output with reduced terms of trade and lower foreign exchange earnings. Both the demand for and the supply of raw materials are assumed to be inelastic, but demand is even more inelastic than supply.

Devaluation is also rejected as a means of reducing the demand for imports. The principal arguments are: the demand for essential imports is inelastic; devaluation causes inflation; and devaluation is inequitable, since equilibrium is achieved through reducing essential imports purchased by the poor in favor of luxury imports purchased by the rich.

In sum, devaluation is frequently condemned as a remedy for restoring equilibrium on the grounds that it causes inflation, reduces standards of living, and is harmful to the terms of trade.

The typical position of the U.N. reports on exchange rates was carried to the point of absurdity when the ECE recommended that countries which were experiencing both inflation and severe disequilibrium should appreciate their currencies.[4] The ECE recommendation, which was vigorously opposed by the Monetary Fund (*Annual Report 1951,* pages 33-36) was based on the assumption of low price elasticities of demand and supply for internationally traded commodities. Appreciation of European exchange rates could therefore be expected to improve Europe's terms of trade and at the same time stem the rise of prices, which was judged to be largely a consequence of higher costs of raw material and food imports. Such reasoning not only reflects the assumption of low demand elasticities but also indicates a tendency to ignore the effects of monetary actions on the structure of internal demand and production. Provided the money supply is not permitted to expand, one of the most important consequences of a change in the exchange rate is derived from the change in the relationship between prices of imported goods relative to other prices and costs in the

[4] *Economic Survey of Europe in 1950* (Geneva: Economic Commission for Europe, 1951), pp. 157, ff.

domestic economy. Thus depreciation should raise the prices of internationally traded goods at the expense of those which do not enter into international trade, while just the opposite effects occur under appreciation. Appreciation will prove deflationary only in the event that the terms of trade are improved with a reduction of exports, so as to provide more imports for the same volume of exports.[5] I regard the possibility of improving Europe's terms of trade without reducing significantly the level of exports as being exceedingly unlikely.

The point to be made is that the U.N. reports appear to minimize the possibility of shifting the balance of trade through monetary adjustments, whether derived from changes in exchange rates or from monetary and fiscal measures. It may be true that modern economies are so inflexible that adjustments necessary to correct a balance-of-payments disequilibrium cannot be achieved by indirect measures without severe unemployment or substantially reduced terms of trade. I do not think the proposition has been demonstrated, however.

What has been said regarding the approach of the U.N. reports to the problem of disequilibrium applies particularly to disequilibrium between the dollar and the nondollar areas. While individual countries can take effective measures for getting into over-all balance and potential equilibrium, balance-of-payments controls are held to be required because of the dollar shortage. The term "dollar shortage" appears quite frequently in the U.N. reports as a kind of universally accepted justification for discriminatory trade and exchange policies. The dollar shortage is usually not defined, but simply stated as datum. One definition taken from an ECLA publication is as follows: "The dollar shortage means that the United States does not purchase merchandise and services or lend money in an amount sufficient to cover the needs, justified or not, of other countries." (*The Economic Development of Latin America and Its Principal Problems,* U.N., 1950, page 19.) It might just as well have been stated that the rest of the world does not sell to the United States an amount of goods and services sufficient to cover its needs.

The responsibility for the all-pervading dollar shortage is generally regarded as something outside of the nondollar countries themselves, individually or collectively. The persistence of this condition eight years after V-J Day and after large outpourings of dollar aid and in the face of a current supply of dollars from normal sources several times the 1938 level is explained by a number of factors including: (1) the reduction in supplies of raw materials and foodstuffs available for the nondollar (free) world from the underdeveloped areas and from

[5] See Randall Hinshaw, "Currency Appreciation as an Anti-inflationary Device," *Quarterly Journal of Economics,* November, 1951, pp. 447-462.

Eastern Europe; (2) the failure of the value of gold production to keep pace with the rise in the value of world trade; (3) the decline in the ratio of U.S. imports from the nondollar areas to gross national production; (4) the relatively rapid rate of U.S. technological progress; (5) the increased defense burdens of Western Europe; and (6) the decrease in net invisible incomes of the nondollar countries.

The solution to the dollar problem, according to the judgment of most U.N. reports, lies largely with the U.S. The elements of solution include a reduction of U.S. trade barriers, a large outflow of capital in the form of untied loans, and economic planning for the elimination of "structural deficits."

Even assuming that the dollar shortage were eliminated, the U.N. reports are generally bearish on the possiblity of avoiding its recurrence without rather extraordinary measures, again by measures external to the countries which experience disequilibrium. The measures which have been suggested include: (1) the automatic provision of credits or drawing rights by countries whose imports have declined by reason of a recession, in favor of countries whose imports have not declined; (2) contracyclical lending by the International Bank; (3) international commodity arrangements.

The U.N. reports are quite right in emphasizing the need for additional liquidity in the international payments system, but there are serious difficulties in schemes which require countries to make available grants or credits whenever they fail to maintain a given level of international payments. Aside from the political feasibility of such schemes, I believe that the important task is to discover ways of adjusting to changes in international demand conditions rather than setting up automatic devices which attempt to make adjustments unnecessary. Moreover, I am convinced that if the United States or any other major country is so foolish as to permit deep and prolonged industrial depressions, such country is not likely to co-operate in schemes for ameliorating the effects of its depression upon other countries. Mild recessions are inevitable in free economies, and sometimes they give rise to healthy adjustments and provide a break to that forgotten man—the fixed-income receiver.

I have somewhat more sympathy for intergovernmental commodity schemes, but I hesitate to see the uneconomic agricultural policies of national governments universalized by their embodiment in international agreements.

### *The Theory of Economic Development*

The U.N. economist who is asked to write something constructive about promoting economic development must, as a rule, accept certain

propositions as part of his terms of reference: (1) that the economic welfare of certain countries is not necessarily maximized by a distribution of world resources which would maximize world GNP; (2) that economic welfare can be increased by specific governmental action; and (3) that increased per capita output means increased human welfare.

There are some who would deny all three of these propositions. For example, some would question whether many countries are really capable of achieving a rapid rate of development even with a large amount of external aid and an elaborate program of governmental action. Some also would deny that increased per capita output will achieve a larger measure of human welfare. But a full discussion of this question would lead us into a philosophical discourse, which I prefer to avoid.

Much of the U.N. literature in this field is devoted to the formulation of development programs. Now a program implies direction by governmental agencies, although the reports usually deny the necessity of direct governmental participation in all phases of the program. The tools for directing development programs include the negotiation of foreign loans for specific projects, controlling foreign private investment, direct governmental investment, government lending, credit policy and monetary management, fiscal policy, exchange controls (including multiple rates), tariffs and other controls over exports and imports. The reports are generally not specific as to how and when this arsenal of government controls should be employed. What they are concerned with are the objectives in terms of the amount and direction of investment, the sources of funds, the impact of investment on consumption and upon imports, expanding the capacity to service foreign loans and investments, et cetera.

How do the economic doctrines underlying the U.N. literature on economic development differ from those of traditional economics? In considerable measure the differences derive from the contrasting institutional framework. Our economic textbooks have been written for modern industrial countries in which there is an abundance of entrepreneurial ability and of capital seeking profitable opportunities. Moreover, it is believed with considerable justification that private enterprise will do a better job than the state. Most of the peacetime problems of countries like the United States can be dealt with by fiscal and monetary measures. In the underdeveloped countries, on the other hand, both the investment capital and the entrepreneurial ability are inadequate for high rates of growth. Moreover, measures for forcing a rapid development by borrowing from abroad and stimulating investment financed by domestic sources create special problems of adjustment. The theory

of economic development is concerned with how investment should be directed and financed so as to minimize such maladjustments as inflation and balance-of-payments disequilibrium. It is also concerned with the optimum allocation of resources in accordance with the principle of marginal social productivity. In a number of U.N. studies rather elaborate ground rules are developed for the determination of consumption and investment targets based on projections of demand and output and of other economic indexes (*Preliminary Study of the Technique of Programming Economic Development,* March, 1953, ECLA, Rio de Janeiro, Brazil, 1953). While the authors of these reports insist that their programs can be executed without a large measure of state ownership and control, it is difficult to see how this can be done without a far-reaching control mechanism. Surely the conflict between elaborate schemes for development planning and the operations of the market economy cannot be resolved merely by paying lip service to the latter.

The U.N. studies have sought to advise governments in planning their investment programs and in allocating resources between primary and secondary industries. (*Formulation and Economic Appraisal of Development Projects,* Volume I, 1951; see also *Measures for the Economic Development of Underdeveloped Countries,* May, 1951.) Most of these reports stress the point that output of agricultural and industrial raw materials must go hand in hand with industrialization. To quote one report: "In a country where there is no surplus labor, industrialization waits upon agricultural improvement because industry should receive only those persons whose labor is no longer required in the production of food. . . . The reverse is the case in a country where the population is so large in relation to cultivable land that the land is carrying more people than can be fully employed in agriculture" (*Measures for the Economic Development of Underdeveloped Countries,* page 59). Where capital is scarce it should, in general, be employed for small-scale improvements rather than big-scale projects (*Formulation and Economic Appraisal of Development Projects,* Volume I, pages 60-61).

All this seems sound advice and represents the application of generally accepted economic principles, including the law of variable proportions. There are, however, several areas in which the U.N. literature on economic development seems to break with the traditional theory. One point of difference lies in the emphasis to be found in the U.N. reports on the terms of trade as a major factor in planning and control. Traditional economics has a great deal to say about the terms of trade, but the typical position has been that efforts to improve the terms of trade by means of controls are likely to be self-defeating. Improvement in the terms of trade has been an important argument for directing

investments into industries as opposed to primary production. In some U.N. reports the doctrine has been put forward that the terms of trade historically have moved against primary producers, and that the fruits of technological progress, whether applied to industry or to raw materials, are captured by the industrial countries. (For a statement of this position see Raul Previch, ***The Economic Development of Latin America and Its Principal Problems,*** U.N., 1950, pages 1-3.) While not all of the authors of U.N. reports adhere to the extreme position of Dr. Raul Previch (who believes that the principle of international division of labor is a fraudulent doctrine designed to cheat the underdeveloped countries out of their rightful share of the total product), the idea that the law of comparative advantage is loaded in favor of the industrial countries runs throughout much of the U.N. literature on this subject.[6] This might be a good argument in favor of having the raw materials countries band together as a group in order to realize short-term gains in their terms of trade by restricting output. I do not believe, however, that it is generally valid for individual countries. Moreover, there is probably a better than even chance that the long-run terms of trade will be favorable to the raw materials and food-producing exporters.

Concern over the terms of trade also arises in the planning of investment with a view to servicing foreign loans. We are told that there should be a proper balance between foreign exchange earning or saving investments and other types of investments so that foreign loans and direct investments can be serviced. Traditional economics was not concerned with the problem of servicing foreign loans, since the balance of payments was adjusted automatically by changes in internal prices or, alternatively, by a change in the exchange rate of the borrowing country. These methods of adjustment have frequently been rejected by U.N. reports for two reasons: automatic adjustments are believed to result in either unemployment or a serious deterioration in terms of trade; and it is feared that the domestic economy is not sufficiently flexible to adjust to a new balance-of-payments situation created by the payment of service charges on foreign debt.

The second important area in which development planners seem to part company with traditional economics lies in the use of exchange and trade controls for promoting development or for correcting maladjustments brought about by the development process. Throughout much of the U.N. literature there are references to the necessity of channeling foreign exchange earnings into productive investment by means of ex-

[6] See, for example, ***Measures for the Economic Development of Underdeveloped Areas,*** p. 57; see, also, ***Relative Prices of Exports and Imports of Underdeveloped Countries*** (U.N., 1949).

change and trade controls. Professor Ragnar Nurkse and others have questioned the net effects of this device on the grounds that if demand is channeled away from imports of consumers goods, it will be spent or invested in some other way equally harmful to the development program (*Problems of Capital Formation in Underdeveloped Countries*, Blackwell, Oxford, 1953, pages 118-119).

It has been argued that even where development programs are financed by noninflationary means, that is, by domestic savings or capital imports, the increase in real income tends to raise the proportion of total expenditures directed toward imports. The traditional answer to the problem created by a shift in the pattern of demand in favor of imports is a change in relative prices; but this solution is usually rejected except for partial devaluation in the form of multiple rates with the higher rates applying to luxuries. But both import restrictions and multiple exchange rates encourage domestic investment in luxury items at the expense of the more fundamental types of investment.

The use of tariffs, trade controls, and exchange arrangements for encouraging industrialization is also widely advocated in the U.N. reports, including the reports of the Economic Commission for Europe.[7] Protective measures have been advocated under the infant-industry argument, the wider marketing area argument, or the various arguments for diversification. The extent to which underdeveloped countries are entitled to special rules governing the use of tariffs and other restrictions has been debated at great length in the ITO Conference and in the Economic and Social Council. While admitting that a case can be made under the infant-industry principle, I believe that it should be limited in time and space and subjected to fairly rigid supervision by an international body. Such supervision, in fact, is provided for in Article XVIII of the GATT.

In concluding this section, I believe that the U.N. reports have made a significant contribution in analyzing the factors contributing to economic development and the obstacles which must be overcome. On the other hand, the reports perhaps have placed too much emphasis upon external capital in the form of public loans and grants as the major bottleneck in rapid development for most countries. Far too little attention has been given to the problem of capital absorption and to the political and social obstacles—of which most Point Four technicians are painfully aware—to the rapid transformation of backward economies. Finally, many of the reports fail to emphasize the desirability of promoting private foreign investment which has the important advantage of

[7] See *Measures for the Economic Development of Underdeveloped Areas*, p. 23; see also *Economic Survey of Europe Since the War* (Geneva: ECE, 1953), p. 219; and *Methods of Financing Economic Development in Underdeveloped Areas* (U.N., 1949), p. 75.

carrying with it technical and managerial know-how not available in any other way.

I certainly would not deny that a rapid transformation of backward economies requires the creation of social overhead capital largely by the governments themselves, and that there may be certain industries, particularly in the public utilities and transportation fields, which must be expanded by governments with the aid of foreign loans where private foreign capital is not available. However, I doubt the wisdom of encouraging developing countries to take over the functions of allocating resources, directing investment, and controlling foreign trade—tasks which are of doubtful value in themselves, which stifle private initiative, and which frequently are beyond the capacity of the local governments to administer with any degree of rationality or efficiency.

### *Unemployment and Domestic Stability*

Much of the U.N. economic literature has been devoted to the subject of unemployment. To a large extent this discussion has been focused on the United States and the problems which would arise from the much heralded postwar depression in this country. The U.N. reports tend to place major emphasis on deficiencies in "effective demand" as a cause of unemployment, which deficiencies, it is assumed, can and should be remedied by appropriate monetary and fiscal measures. Some economists have been critical of automatic mechanisms which operate on the level of effective demand for combating unemployment. (See Jacob Viner's "Full Employment at Whatever Cost," *Quarterly Journal of Economics,* August, 1950, pages 385-407; and H. C. Wallich, "U. N. Report on Full Employment," *American Economic Review*, December, 1950, pages 876-883.) It is pointed out that while no one would favor a recurrence of mass unemployment such as existed in the thirties, policies designed to prevent unemployment from exceeding 3 or 4 per cent might necessitate a more or less continuous inflation. Moreover, it may be argued that short-term recessions are not only inevitable in a dynamic economy but that they help to iron out some of the price disparities and other maladjustments which occur during the process of economic growth.

The approach of the U.N. report entitled, *Measures for International Economic Stability*, which was prepared under the chairmanship of Professor James Angell, seems to me to avoid some of this criticism. It assumes that most nations are not going to permit severe and sustained unemployment but that there will be plenty of room for economic instability which is likely to have serious international repercussions. Moreover, this report recognizes that there are many causes of international instability which have nothing to do with fluctuations in economic

aggregates. Instead of setting up an elaborate system whereby countries are in a sense penalized for permitting a decrease in effective demand, as was recommended by the U.N. report entitled, *National and International Measures for Full Employment*, the Angell report makes certain recommendations for mitigating the effects of these inevitable factors making for international instability. These measures, you will recall, include international commodity schemes, contracyclical lending, and increased access to international monetary reserves.

The U.N. reports also have been concerned with the problem of domestic inflation. While some of them have tended to depreciate the effectiveness or feasibility of orthodox anti-inflationary measures and to emphasize the influence of external causes of inflation,[8] they have, on the whole, done a pretty good job in analyzing the forces making for inflation. However, they have not resolved the conflict between full employment and rapid economic development on the one hand and domestic stability on the other.

In conclusion, the U.N. reports deal with problems which arise from the fact that the forces postulated by traditional economic theory fail to operate or from a dissatisfaction with the social results of their operation. Private capital does not flow freely between nations in response to different earning ratios, but even if it did there is dissatisfaction, rightly or wrongly, with both the amount and allocation of foreign investment funds in countries whose per capita incomes are relatively low. Disequilibrium, from whatever causes, frequently cannot be cured by the traditional remedies, except under conditions which are intolerable to modern countries. Dependence upon the price system alone is believed to lead to unemployment, severe repercussions on the terms of trade, or a low rate of economic development. Finally, it is assumed that planning and governmental allocations and controls can achieve a more socially desirable result.

[8] See, for example, "Inflation and the Mobilization of Domestic Capital," by A. K. Das Gupta, M. F. Friedberg, and I. G. Patel, *Economic Bulletin for Asia and the Far East* (U.N.), February, 1952, pp. 21-39.

# IBRD MISSION ECONOMIC GROWTH THEORY

"To defy Power, which seems omnipotent."—
PERCY BYSSHE SHELLEY in *Prometheus Unbound*

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It is my purpose, in this paper, to identify some of the concrete conditions to which economic retardation is attributed in IBRD mission reports and to present and evaluate some of the means described therein as suited to remove or to dissipate these development-preventing conditions. The reports on which this paper is based include eight in which an implemented development-producing program is detailed (i.e., those on Ceylon, Colombia, Guatemala, Iraq, Jamaica, Nicaragua, Surinam, and Turkey); one (that on Cuba) in which recommendations but not a public investment plan are set down; and one (that on Mexico) in which an economy's post-1939 progress is subjected to statistical analysis and projected into the future. While these reports vary greatly with respect to literary quality, expositive skill, mode of organization, amount and solidity of data included, and rigor of economic and sociological analysis, they deal with various subjects common to all, they include numerous solutions which most of the missions appear to approve, and they are at one in seeking dissolution of forces making for economic backwardness.

There is not to be found in these reports a complete disclosure of all the significant causes of economic underdevelopment, nor an adequate account of all systems of socioeconomic therapy by which these causes might be removed. When an IBRD mission visits a country and assesses its economy, this mission operates under a circumscribed set of agenda, even though it is solely responsible for its conclusions and recommendations. For the mission has been organized by the Bank at the request of the country visited, and its recommendations are intended for study by, and discussion between, the Bank and the country's government. Moreover, it being the purpose of a mission to induce action on the part of the government of a visited country, its recommendations must be limited to those which it feels that the government can, as a practical matter, carry out. Accordingly, missions must necessarily refrain from suggesting institutional or other changes which are completely beyond the scope of practical politics. Furthermore, since the purpose of a mission is not the advancement of economic learning but the bringing about

of governmental action, analysis of the process of economic development is limited, in the economic sections of reports, to what is necessary to explain the recommendations made. It is not, therefore, a mission's function to formulate a theory of development; and so when, in this paper, I point to what seem to be omissions or implications in reports or when I suggest the need for greater national social-structural changes than the reports recommend, I usually am discussing matters which were not concerns of the missions in question.

## I

The major characteristics of the economies of the countries visited appear to be these (see Table 1):[1] With the exception of Mexico and Turkey, all are of relatively small geographic and demographic dimension. Population density is relatively great in Jamaica and Ceylon, medium in Cuba, Guatemala, and Turkey, and low in the others. Everywhere except possibly in Cuba the rate of natural increase falls within a range of 2-3 per cent per year. The populations of all but Turkey and Iraq remain more or less ethnically and/or racially heterogeneous. Literacy and the level of education are low in at least eight of the countries. Health conditions appear to be describable as ranging from poor to bad in all the countries visited with possibly the partial exception of Surinam and Ceylon. In at least six of the countries the ratio of the labor force to the population is comparatively low, in part for reasons of age composition. While only the reports for Cuba and Jamaica emphasize the importance of persisting unemployment, all of the reports reveal the presence of considerable concealed unemployment. Agricultural employment predominates in all of the economies, with output per worker generally lower in agricultural than in nonagricultural activities. The stock of cultivable land appears, given sufficient effort, to be appreciably augmentable (though not usually in the vicinity of present population centers) in the countries other than Mexico, Colombia, Jamaica, and Turkey, and to be somewhat augmentable even in these four. Although only in Cuba does more than a fifth of the population live in cities of above 100,000, roughly 25-44 per cent of the population of the countries other than Ceylon is urban (i.e., lives in places of 1,000-5,000 or more). Per capita income is below $200 in eight countries and below $150 in five. Five of the countries are largely dependent upon external markets, with several commodities predominating in their exports. Inequality characterizes the distribution of income in a number of these countries; yet the rate of capital forma-

[1] Most of the data presented in this table are based upon the reports; they relate to one or several recent years for which data are available; and they are intended primarily to indicate orders of magnitude.

TABLE 1

| Country | Population 1950–51 | | Per Cent of Population | | Labor Force as Per Cent of Population | Per Cent Labor Force in Agriculture | Per Cent GNP in Agriculture | GNP Per Capita | Exports GNP (Per Cent) | Per Cent of Population Literate |
|---|---|---|---|---|---|---|---|---|---|---|
| | Absolute (000) | Per Km | Urban | In Cities of Over 100,000 | | | | | | |
| Nicaragua | 1,088 | 7 | 33 | 10 | 31 | 72.9 | 41 | 155 | 27 | 30 |
| Guatemala | 2,887 | 27 | 26.6 | 10 | 38 | 73.1 | 56.7 | 120 | 15 | 35 |
| Cuba | 5,469 | 48 | 43.9 | 22 | 32 | 41.5 | 28 | 371 | 34 | 78 |
| Mexico | 26,332 | 13 | 33.5 | 15 | 33 | 65.4 | 17 | 205 | 17 | 48 |
| Colombia | 11,266 | 10 | 29.1 | 13 | 50 | 73 | 36 | 199 | 12 | 56 |
| Jamaica | 1,430 | 125 | 18.2 | 14 | 42 | 48.1 | 40.1* | 155* | 17* | — |
| Surinam | 233 | 2 | 40+ | — | 29 | 63 | 23 | 265 | 36 | 70 |
| Iraq | 5,100 | 12 | 33 | 16 | 25 | 60+ | — | 85 | 13† | 10–15 |
| Turkey | 20,900 | 26 | 24.2 | 16 | 48 | 79.8 | 47.5* | 128* | 10* | 37 |
| Ceylon | 7,742 | 118 | 11.7 | 5 | 39 | 51.3 | 55 | 120 | 42 | 58 |

* Based on national income, not GNP.
† Oil exports not included.

tion is comparatively low in most (see Table 2). The economies of most of these countries appear to be relatively instable, being small, under the dominance of primary production, and subject to the immobility and the viscosity so often characteristic of societies under such dominance. At least three of the countries (Cuba, Jamaica, and Mexico) are highly accessible to the economic and cultural influence of an advanced economy.

Even though a country's economic backwardness is attributed immediately to the inefficient manner in which its resources and potential labor time are used, in a number of the reports this inefficiency is traced at least in part to noneconomic determinants present in the social structure and the culture of its population. (The attribution is not, of course, made as a sociologist would make it, since it apparently is not common practice to include a sociologist or an anthropologist among a mission's complement of personnel.) In most of the reports attention is called both to inadequacies in public administration, in the fiscal system, and in the institutional provisions existing for the supply of credit and banking services, and to shortcomings in the agricultural, industrial, commercial, transport, and other sectors of the economy. As a rule, the importance of health, education, and training is stressed, and deficiencies in the available supply of industrial and managerial skills are remarked. In the Guatemala report the "cultural isolation and the defensive attitude of the Indians" was described as one of the country's "basic national problems"; and the somewhat noneconomic character of prevailing sources of unsatisfactory labor-management relations was noted even though the subsequent leftward course of government policy was not forecast. In the report on Cuba, "unconstructive attitudes," themselves "largely the result of the unstable and static nature of the ecoonomy itself," are described as among "the chief obstacles to economic progress." The report on Ceylon includes among the circumstances responsible for that country's retardation the "complex field of interests, motives, aptitudes and cultural background," the influence of tradition and cultural heredity, the absence of attitudes of scientific curiosity and habits of "business enterprise and innovation," the lingering aftermath of a long-discarded caste system, the "conservative pressure" of "religious forces," and so on. In the report on Jamaica it is observed that "development is not simply a matter of 'economics.' It can easily be frustrated by purely non-economic obstacles such as adverse political and social attitudes or a lack of the energy and co-operation which it demands from people at all levels in the community." In several reports the incentive-suppressing and stagnating character of the landholding system is noted.

One gets the impression, despite these observations, that not all

TABLE 2*

| Country | Gross Capital Formation/Gross National Product | | | | | | Net Foreign Lending/Gross Capital Formation | | Annual Rate of Growth of GNP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Before Plan | | | Under Plan | | | | | | |
| | Public | Private | Total | Public | Private | Total | Before Plan | Under Plan | Before Plan | Under Plan |
| Nicaragua | .02 | .04 | .06 | .10− | .04+ | .14 | n.a. | .10–.12 | n.a. | .05 |
| Guatemala | .049 | .053 | .102 | .083 | .047 | .13 | .06? | .09 | .025 | .025+ |
| Cuba | .02 (.02) | .13 (.09) | .15 (.11) | — | — | — | −.27 | — | .045 | — |
| Mexico | .056 | .084 | .14 | — | — | — | .04+ | — | .07 | .07+ |
| Colombia | .045 | .122 | .167 | .049 | .102 | .151 | .32 | .063 | .06 | .05 |
| Jamaica | .035? | n.a. | n.a. | .07? | n.a. | n.a. | n.a. | .28− | .045 | .04–.05 |
| Surinam | .101 | .139 | .24 | .112–.117 | .086–.099 | .191–.211 | .62 | .25–.31 | .0525 | .035–.04 |
| Iraq | .06? | n.a. | n.a. | .07? | n.a. | n.a. | 0 | 0 | Low | n.a. |
| Turkey | .074 | .066 | .14 | .076 | .079 | .155 | .144 | .06 | .02–.03 | .03–.035 |
| Ceylon | .053 | .06 | .113 | .065 | .055 | .12 | — | .08 | n.a. | .025+ |

* See note 4; n.a., not available; rates for Jamaica and Turkey based on national income and gross capital formation; "?" indicates doubtful.

matters worthy of attention are receiving it. There is almost nothing on the shape of the curve of the elasticity of demand for income in terms of effort, on the determinants of this curve, on the manner in which this curve shifts through time, or on related matters.[2] Again, inasmuch as the village plays so central a role in many of the underdeveloped economies, it might be worth while devoting more attention to alternative ways in which the village may be transformed and integrated into a modern type of economy, especially since a fundamental problem in most of the countries examined is that of substituting a dynamic, universalistic, and generalized network of reciprocity for a traditional, particularistic, and localized one. In the Turkey report, the rise of *étatisme* is traced, not to the fact that in Middle Eastern societies private and responsible initiative did not flourish,[3] but to the failure of domestic private enterprise to meet speedily enough the demands made upon it by Ataturk. In the report on Iraq, like Turkey a successor state to the Ottoman Empire, the progress-retarding influence of residues of Ottomanism is neglected. The question that comes to mind is this: given a cultural heritage of the sort encountered in the Middle East, is private enterprise as capable of generating the forces of economic development so expeditiously as some of the mission reports seem to imply? Turkish belief in an affirmative answer is suggested by a recent article in the *Christian Science Monitor* (October 5, 1953, page 10) according to which *étatisme* has been given up in Turkey and responsibility for development has been turned over to domestic and foreign private enterprise in the hope (among others) that the prospect of 25-35 per cent dividends will attract 2 billion dollars of foreign investment. Perhaps experience will confirm the validity of this belief.

## II

The mission reports stress some but not all of the potential sources whence increases in aggregate and per capita output may flow. For such increases may be brought about in an economy in any one of the following ways: (1) the stock of productive and employed assets may be augmented through the addition thereto of both similar and improved units which heretofore have not existed; that is, through net capital formation; (2) the stock of productive and employed assets may also be augmented through the addition thereto of productive agents which, though in existence, have been inactive (e.g., unemployed labor, land,

[2] Cf. Elizabeth E. Hoyt's Guatemalan paper, "Tiquisate: A Call for a Science of Human Affairs," *Scientific Monthly*, 1951, pp. 114-119; but see, also, Simon Rottenberg, "Income and Leisure in an Underdeveloped Economy," *Journal of Political Economy*, 1952, pp. 95-101.

[3] A. Bonne, "Recent Socio-Economic Changes in the Middle East," *Royal Central Asian Journal*, 1940, pp. 295 ff.

capital, etc.); (3) the productivity of agents of production may be increased whenever, because they have been underemployed or only partially employed, they are transferable from less productive to more productive forms of employment; (4) the productivity of labor may be increased (within limits) through improvements in the health and education of the labor force and through increases in the number of hours worked per worker per year; that is, through an increase in the amount of work time and in the intensity with which the work is carried on; (5) the productivity of labor may be increased through organizational and technological laborsaving changes which operate to reduce labor input per unit of output; (6) productivity per worker may be increased by technological and organizational changes which serve to reduce input per unit of output of productive agents used jointly with labor. While we have distinguished capital formation analytically from the other sources of improvement, it is nonetheless the case that output-increasing changes embraced under 2-6 usually involve, or may involve, additions to the stock of capital. In the reports some attention is given to 3, 5, and 6, and considerable attention to 1, 2, and 4.

In the reports on Cuba, Jamaica, and (in lesser measure) Ceylon, it is anticipated that the measures proposed will serve to reduce chronic unemployment of labor; and in these as well as in other reports it is indicated that comparatively unemployed land will be brought into use. The changes in question will be consequential upon increases in gross investment. All the reports remark or imply that improvements in health would enable the representative worker to increase his output of work per year just as would increases in the amount of employment made available per worker per year; and they suggest that improvements in elementary, secondary, vocational, and professional education would augment the skill and employability of the population of working age. A number of the reports dwell upon the need to reduce labor and other inputs per unit of output through the introduction of improvements in organization and technology.

In most of the reports considerable attention is devoted to essentially economic institutional arrangements by the satisfactoriness of whose functioning developmental prospects are conditioned. Among those usually selected for extensive treatment is the visited country's fiscal system, together with its revenue-raising devices. Another is the system of public administration, since the effectiveness with which a plan for development can be carried out turns on the adequacy of the state bureaucracy. Yet another is the money and banking system, since the efficiency with which resources can be mobilized and allocated depends upon there being adequate provision for the supply of short-term, intermediate, and long-term credit. The role of the trade-union is con-

sidered only in the reports for Jamaica, Guatemala, and Cuba; in the other countries, with the exception of Surinam where labor is relatively scarce, there is little or no trade-unionism, and underemployment, together with a high rate of increase in the labor force, makes the bargaining position of labor relatively weak. In several of the reports it is recommended, however, that labor and management be made to realize that their interests are more or less identical in respect of increases in productivity and related matters.

Perhaps the strategically most important of the ways in which an increase of output can be brought about in an underdeveloped economy are those making for the full use of unemployed, partially employed, and underemployed resources and those making for increases in the rates of gross and net capital or resource formation. Insofar as these inadequately employed resources (principally labor; rarely land or capital) can be set to effective work, it becomes possible (given active entrepreneurship) for an economy's output of consumer goods and its stock of utilized nonhuman resources to grow simultaneously, with the result that capital formation is accelerated at the same time that per capita consumption is elevated. This process, noted already by A. Smith and Malthus, can continue so long as unutilized reserves of productive power exist, but only on condition that, given an economy's internal and external marketing opportunities, conditions of balanced growth can be maintained and an approximation of Say's Law can be continually actualized. Given such an approximation, however, the output-increasing influences of the law of increasing return is continually reinvigorated, subject, of course, to limitations imposed by the low elasticity of supply of some types of input; and average output and consumption can continue to rise together. The criticism advanced in a number of reports, to the effect that entrepreneurs prefer low volume with high profit margins, needs to be reformulated in the light of the balanced-growth principle. It is economically rational to choose high profit margins when demand is relatively inelastic; abstracting from the margin-reducing effects of improvements in transport and communication, it is through simultaneous expansion on all or most subsector fronts rather than through individual efforts to reduce profit margins that a situation conducive to high volume and low margins is most likely to be established.

It is questionable whether problems attendant upon the mobilization of an economy's underutilized resources receive enough attention in the reports. It is essential to determine where the underutilized resources are located and into what employments they are to be directed. The answer to the second turns on an economy's relations with the world economy—relations which in turn are conditioned by (*inter alia*) an

economy's size and by its pattern of resource equipment. Only two, or possibly three, of the economies under analysis appear to be large enough to become at all autonomous; development within the others presumably must proceed within the framework of one or several of the world economy's nation-transcending subsystems. If this be the case, it may be to the point to emphasize agricultural development in a small economy, accessible landed resources permitting; but it is not permissible to emphasize it in an economy nearly four-fifths of whose labor force is attached to agriculture; and it may not even be warrantable to emphasize it in a small economy if the agricultural labor force is relatively large and the amount of suitable land relatively small.

TABLE 3*

DISTRIBUTION OF MAXIMUM PUBLIC INVESTMENT, BY INVESTMENT CATEGORIES, IN PER CENT

| Category of Public Investment | Nicaragua | Guatemala | Colombia | Jamaica | Surinam | Iraq | Turkey | Ceylon |
|---|---|---|---|---|---|---|---|---|
| Agriculture and Irrigation | 35.5 | 16 | 10.6 | 41.2 | 52.5 | 37.2 | 14.8 | 25.20 |
| Industry and Mining | 5.0 | — | — | 16.3 | 3.0 | 21.9 | 14.8 | 5.25 |
| Transport | 30.2 | 44 | 38.9 | 5.6 | 16.0 | 18.1 | 35.7 | 25.75 |
| Telecommunications | 2.2 | 5 | 2.9 | — | — | | 3.5 | |
| Power | 5.9 | 20 | 15.4 | — | — | — | 12.2 | 11.50 |
| Public Works | — | — | 14.1 | — | — | 14.9 | 15.7 | 7.00 |
| Housing and Building | — | — | 18.0 | 15.9 | 11.0 | — | — | 2.50 |
| Health | 16.1 | 14 | † | 20.6 | 14.3 | 3.0 | 3.5 | 11.00 |
| Education | 6.4 | | † | | | 3.6 | | 10.25 |
| Administration | — | — | — | — | 3.3 | 0.9 | — | 1.30 |

* See text above, close of first paragraph in section IV.

† Included under building.

Inasmuch as the unutilized productive power of an economy is limited, the continual achievement of a high rate of growth presupposes a high rate of capital formation so that resources used per worker may continue to rise and it may continue possible to introduce technologically superior methods and techniques of production. The reports are concerned primarily with the augmentation of provision for those forms of capital and improvement which, though not very exploitable under the rules of private entrepreneurship, are absolutely essential to the development of an economy. Included in this category are outlays for public utility development, health, education, public works, and other social-overhead capital (see Table 3). It is thus recognized that whatever be the marginal social benefit of private investment, its marginal private benefit can be elevated enough to stimulate further domestic investment and perhaps attract some foreign capital (given that other conditions are satisfactory) only if adequate provision is made for social and related overhead capital.

Whether the capital formation rates reported in Table 2[4] are adequate turns on the test applied. Will these rates both counterbalance population growth of 2-3 per cent per year and permit per capita income to rise 2-3 per cent per year? Will they make possible the growth rates reported in the last column of Table 2? Are they sufficient in light of the experience of the past century? Will they enable the affected populations to break through the Malthusian and other barriers to modernization?

In two of the reports (Surinam and Ceylon) the average ratio of reproducible capital to output characteristic of underdeveloped countries is estimated at 3.5-4:1; and the corresponding marginal ratio is implied to have about the same value. The value of this ratio depends upon an economy's industrial composition, since the ratio varies with industry, being much higher in some (especially transportation and public utilities) than in others. The ratio tends to move downward when industrial composition changes appropriately, when investment moves into what we shall later call relatively productive uses, when (as in Mexico around 1939) there is considerable unused capacity, or when (as in agriculture and other sectors of underdeveloped economies) output may be increased appreciably through the introduction of practices (e.g., use of better working capital, of better technological or organizational methods, of more work-shifts) that entail the use of little additional capital. Presumably, however, any such downward movement is quite limited. Accordingly, if a 3.5:1 ratio holds and if population is growing 2-2.5 per cent per year, there will be required to counterbalance this growth annual net savings amounting to 7-8.75 per cent of the national income, and, to make possible an increase of 2 per cent per year in per capita income, at least something like another 6-7 per cent of savings, or 13-15.75 altogether. Since the rates reported in Table 2 must probably be reduced by one-fourth or more to put them on a net basis, a number of them would appear to be inadequate to permit much more than a counterbalancing of population growth. The anticipated rates of growth reported in the last column appear to be in excess of what the gross capital formation rate (see column 7) warrants with respect to Nicaragua, Mexico, Jamaica, and Colombia. Should the rate

[4] Table 2 is based upon the reports. Data for Cuba when in parentheses refer to investment in Cuba; otherwise they refer to internal and external investment. The Jamaica report indicates that developmental and welfare expenditures rose from about 7.07 million pounds in 1952 to about 10.85 million pounds under the plan; that in 1950 national income approximated 85 million pounds; and that foreign loans and grants must furnish around 0.6 of the funds required. In 1950-51, Ceylon experienced an increase in foreign assets somewhat in excess of one-fifth of her gross domestic capital formation; but this is not included in columns 2-4. Inasmuch as health, education, and similar expenditures have been included under gross capital formation, the rates given in Table 2 are somewhat above what they would be if this concept were defined as usual and these expenditures were eliminated.

of gross capital formation accelerate, the ratio of net to gross rates will rise, and should conventionally determined depreciation continue to exceed replacement, growth will proceed at a rate in excess of that implied by the estimated net saving rate. (See E. D. Domar, "Depreciation, Replacement and Growth," *Economic Journal*, 1953, pages 1-32.)

The rates reported in Table 2 are appreciably below current Eastern European rates and somewhat low by late nineteenth-century standards. For example, in Sweden, where aggregate and per capita real national product grew, respectively, 2 and 1.3 per cent per year in 1869-1913, domestic gross capital formation, expressed as a percentage of gross national product, rose gradually from 5.8 in the 1860's to 18 in 1901-10. In Denmark where the corresponding aggregate and per capita rates grew 2.8 and 1.8 per cent per year, the corresponding gross rate fluctuated somewhat around an average of 15 per cent. Since in each country population was growing a little over 1 per cent per year much of the time, more than half the fruits of capital formation could accrue to the individual.[5]

If an economy's rate of capital formation is too low, steps may be taken to elevate it. It is essential that the financial institutional structure suffice to assemble actual and potential voluntary savings and sluice them into the relatively more productive sectors of the economy; this need is recognized in most of the reports. It is necessary, if a very high rate of growth be desired, that the social, political, legal, and ethical structure of a lagging underdeveloped country be so transformed that the surplus above essential consumption currently obtainable within its economy is maximized and, under the pressure of the politico-economic mechanism and the associated value system, is converted into both essential and productive equipment by those performing the enterpreneurial function. This point is not sufficiently emphasized in the reports, nor is adequate attention given to the problem of entrepreneur recruitment. It is useful to call attention to *étatisme;* and it is well to note the potentially strategic importance of private enterprise, provided that this enterprise is forthcoming domestically or from abroad. While it is important that disadvantages associated with inflation be emphasized, it is also important that the illiquidity of the asset structures of underdeveloped countries be recognized,[6] together with the fact that under

[5] Data on growth and capital formation were presented by S. Kuznets and R. W. Goldsmith at the November, 1953, National Bureau of Economic Research conference on capital formation and economic growth. These and other conference papers will be published in 1954.

[6] The assets of all banks (other than the Central Bank) expressed as a percentage of gross national product around 1950 stood at 0.54 in the United Kingdom, 0.52 in the United States, and 0.31 in Cuba; it ranged from 0.22 in Jamaica and 0.2 in Iraq to 0.11 in Mexico and 0.13 in Guatemala. On the assumption that this ratio provides a crude comparative measure of the liquidity of national asset structures, it becomes evident that

suitable conditions mild inflation may be made to facilitate capital formation and economic development.[7] It is noted in a number of reports that capital formation is retarded by the disposition of those with funds to invest them in land and real estate and in consumption and other high-interest-bearing short-term loans; but it is overlooked that should funds continue to flow into these categories of investment, their relative attractiveness must descend to a point where they cease to draw additional resources. It is primarily because the borrowers (sellers) do not convert the proceeds of these loans (sales of property) into savings that capital formation is retarded. If we abstract from the influence that socioeconomic instability has upon rationally conceived asset preferences, it may be said that the social and economic side effects of industrial and commercial investments make them more conducive to growth than are landed and real estate investments; the former tend to be more stimulative, more productive, and, since they often give rise to depreciation in excess of replacement, more conducive to capital formation.

While the limitedness (borne out by nineteenth-century experience) of the capacity of foreign loans to contribute (see Table 2) to a country's capital formation is recognized and while the importance of capital imports is stressed, the contribution that appropriately conceived and satisfactorily administered exchange and related controls (e.g., quantitative restrictions, multiple exchange rates, quotas)[8] can make to gross investment and economic development is inadequately treated in most of the reports. Instead there is emphasis upon the possibilities of expanding trade and stimulating foreign investment and upon unsatisfactory aspects of existing exchange control arrangements. Similarly, the adverse effects of protectionism, particularly when re-enforced by domestic monopoly, are noted; but the sometime essentiality of "infant industry" protection is inadequately taken into account. The reports reveal that the average import-content of investment falls, as does that of recommended investment, between 0.32 (Colombia, Mexico, Ceylon) and 0.6-0.65 (Cuba, Guatemala, Surinam), with the variation depending upon intercountry differences in factor equipment and in composition of investment (e.g., in Colombia the average ranged from 0.19 in

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underdeveloped economies operate under the disability of comparative illiquidity. The data are from the reports of the International Monetary Fund, *International Financial Statistics*.

[7] On points made in this paragraph, see Martin Bronfenbrenner, "The High Cost of Economic Development," *Land Economics*, 1953, pp. 209-218; papers by M. Abramovitz and P. A. Baran in B. F. Haley, *A Survey of Contemporary Economics* (Irwin, 1952); and P. A. Baran, "Economic Progress and Economic Surplus," *Science & Society*, 1953, pp. 289-317.

[8] Cf. E. R. Schlesinger, *Multiple Exchange Rates and Economic Development* (Princeton, 1952).

building through around 0.5 in agriculture and industry to about 0.6 in mining). Presumably marginal import-content tends to be higher than average; in the Mexican report the two values are given as 0.32 and 0.42. In the absence of sufficient constraints, however, the magnitude of the total increment in imports consequent upon a given increment in investment will exceed the magnitude of marginal import-content, since the investment process gives rise also to consumption-goods imports; thus in Mexico, with a marginal propensity of 0.114 to import consumption goods, the magnitude of the total increment of imports exceeded by 0.4 that yielded by the value for marginal import-content. Evidently, then, total foreign currency requirements generated either by investment in general or by investment programs of the sort recommended normally will exceed the amount suggested by an average import-content coefficient. Controls may be employed, however, to hold down these consumption goods imports. More generally, since in the recent past goods describable as capital have been comprising only about 0.25-0.4 of imports, more attention might be given in the reports to whether through recourse to suitable controls this fraction could be augmented appreciably and with but minor side effects. If it could, dependence upon foreign loans for overhead capital could be reduced, with the possible consequence that development-generating direct investment of foreign capital, skill, and entrepreneurtia would be stimulated. (See J. N. Hunter, "Long-term Foreign Investment and Underdeveloped Countries," *Journal of Political Economy*, 1953, pages 15-24.)

## IV

That economic development depends upon the composition as well as upon the quantity of investment is variously recognized in the reports. It is implied, further, since great reliance is placed upon private enterprise in all the reports, that the composition of public investment will be subject to a somewhat different set of constraints than is private investment. Public investment is indicated, the reports imply, whenever, at least in the shorter run, the marginal social benefit of such investment appreciably exceeds the marginal benefit that could readily accrue to private enterprisers. The composition of public investment, the reports further imply, should at least be such as to make it highly complementary to a country's resource structure and to its investment at the private level, thereby serving to increase the rate of return on private investment, together with its attractiveness and its self-financing capacity; and it probably should also be such as will tend to set in motion the dynamic forces which underlie cumulative development. Accordingly, only a minor fraction of the funds to be mobilized under the pro-

grams outlined in the reports is to be made directly available to private enterpreneurs who are short of long-term or short-term capital (Table 3). The Colombia program called for an investment of 5,088 million pesos, of which 32.5 per cent was to be public and 67.5 private. Only the public is included in Table 3.

Private entrepreneurial and investment problems receive considerable attention in the reports, however, both because great reliance is placed upon private enterprise and because it is believed that a nation's economy can develop cumulatively only if private enterprise is allowed to proceed freely and in accordance with certain principles. Among the characteristics that, various reports state or imply, fit a branch of agriculture or an industry for introduction or expansion in an underdeveloped country, the following may be enumerated: labor-intensive rather than capital-intensive; oriented to relatively large export market (e.g., oil, bauxite); requires relatively little rather than relatively much foreign exchange; tends to improve balance of payments; makes use primarily of locally available managerial abilities, raw materials, skills, and kinds of manpower; is sufficiently complementary to other types of industry found or being developed in the country; requires relatively little of natural resources or other productive agencies in comparatively short supply; supplies an essential rather than nonessential product or service for which there is or would be an effective demand given the level, extent, and distribution of income; can operate, given the magnitude of the domestic market, at something like optimum scale and capacity; does not require protection or subsidization for more than a very short period at most; may provide off-season employment in the event an economy's major industry (e.g., sugar production in Cuba) is a seasonal one; diversifies and expands exports or replaces imports; improves internal distribution of economic activities and population; contributes to the development of the economy and the expansion of the standard of living. In some instances what is recommended in one report is not recommended in another; thus cottage industry is opposed (Iraq) and supported (Ceylon), apparently because of differences in population pressure and concealed unemployment; diminution of the agricultural population is recommended in one report (Colombia) but not in another (Turkey). In at least eight of the reports there is described as existing, or the establishment of one is recommended, a development board (or corporation or its equivalent) whose functions include the stimulation, planning, and co-ordination of developmental activities at the state level, the mobilization of financial resources for this purpose, and the creation and improvement of a financial, fiscal, and technical structure within which private enterprise can develop industries suited

to the economy, and so on. In the Mexican report the need for an "organic" development program is indicated.

In each of the reports, agricultural and nonagricultural activities which meet enough of the above criteria are identified and certain activities which do not yet meet these criteria (e.g., some of the heavy industries) are specified. Within the category of approved agricultural activities fall crops which are being, or which probably can be, produced successfully. Within the category of approved industrial activities fall a variety, many common to all countries and some suitable only to a few. Among the industrial activities which are described as suited to at least some of the countries visited are: the processing of agricultural products and the preparation of certain food stuffs (e.g., food processing and canning, dairy products, flour milling, rice and its products, sugar and by-products, coffee and tea, confectionery and chocolate, cotton ginning); beer, soft drinks, rum, etc.; tobacco and tobacco products; vegetable oils, coconut products, etc.; starch; fish and meat and by-products; hides and leather; building materials (e.g., cement, brick, tile, glass); textiles, clothing, and shoes; ceramics and pottery; light machinery, tool, and metalworking industries; light chemical industries (e.g., simple pharmaceuticals, vaccines and serum, soap, insecticides); fertilizer; minerals; matches; animal feeds; bottle tops; rubber goods; paper and iron and steel products insofar as practicable; petroleum products when practicable; fibers and fiber products; aluminumware; handicrafts. Most of the activities described as suitable to be undertaken fall roughly into one or more of three categories: export-oriented, consumer-oriented, and construction(building)-oriented.

On at least four points the reports are obscure. (1) While capital scarcity imposes a high average labor-capital ratio on an economy and generates a price structure conducive to the selection of a relatively high labor-capital combination on any given isoquant, it does not in any particular instance impose a high labor-capital technique; which technique is to be preferred depends upon the alternatives available, upon the objectives sought by the society, and upon the comparative scarcity of the particular kinds of labor and productive agents required to exploit particular techniques. (2) The possibility that the amount of social overhead capital required directly and indirectly per worker may vary with the pattern of industrial location and so make one pattern less capital-absorbing than another receives little if any attention in the reports. (3) The extent to which output can be increased by shunting investment from less productive channels (e.g., housing, public building) into more productive channels (e.g., argiculture, manufacturing,

mining) is not examined in detail, though several reports (Nicaragua, Colombia, Guatemala, Turkey) suggest that considerable capital went into relatively unproductive uses and another (Mexico) attributes the highness of the Mexican rate of output growth in part to the comparative smallness of the proportion of gross investment embodied in housing and building. (4) Although population growth's possible counterbalancing of gross capital formation is treated in at least three reports (Ceylon, Colombia, Jamaica), it is not adequately recognized that public health methods which make a population more rational and hence more disposed to regulate its numbers are superior to methods which require little or no such co-operation on the part of the population.

Some students of the development process believe that investment must be of sufficient quantity and the right kind if it is to trigger off a cumulative process of development and bring into being growth-sustaining institutions that enable the process to persist. These students are aware that this effect can be produced only if there has been built up what amounts to a store of energy which can be triggered off, a situation found in the past in underpopulated countries to which European migrants carried technology and political liberalism as well as in populous countries dominated by development-seeking states, and sustained by a combination of much domestic with relatively little foreign investment, a considerable part of which flowed into industries that were export-biased and/or subject to increasing return.[9] These students believe further that development can best be gotten under way in countries (or regions) suitably peopled and sufficiently large and resource-rich to be developable by maintaining investment at a very high level—as high as is compatible with a strong state-administered system of controls—since continuance of investment at a very high level for, say, ten to fifteen years would eventually augment income and consumption per capita very greatly and probably produce conditions prerequisite to effective population control. By contrast, a small rate of investment, particularly if it were widely dispersed and not incorporated in social overhead and increasing-return industries, would have little influence upon natality or per capita income. Only in the Colombia report (Chapter 17), however, is investment and development envisaged in these terms, and then only in part:

> It is necessary to bring about simultaneous improvements throughout the entire economy. By and large, the individual segments of the economy cannot progress rapidly apart from the whole. . . . Improvements in one sector make improvements in the other sectors

[9] See J. R. Hicks, "An Inaugural Lecture," *Oxford Economic Papers*, 1953, pp. 127-130; J. H. Adler, "The Fiscal and Monetary Implementation of Development Programs," *American Economic Review*, May, 1952, pp. 588-596; R. Nurkse, "Some International Aspects of the Problem of Economic Development," *ibid.*, pp. 571-583.

easier. . . . Only by a generalized attack throughout the whole economy on education, health, housing, food and productivity can the vicious circle of poverty be decisively broken. But once the break is made, the process of economic development can become self-generating. Each improvement leads to others and the whole level can thus be raised.

I find I have done with my time without having done with my subject. I am afraid that I have seemed unduly critical, particularly with respect to matters the missions were not empowered or lacked the time to treat effectively. May I say directly, therefore, what I have sought to imply throughout this paper, that the mission reports are a repository of information concerning both the nature of the development process in general and divers empirical situations within which development does or does not get under way.

## DISCUSSION

WILFRED MALENBAUM: Note should be made of the clear contrast between the speakers with regard to what I presume one might call "an economic doctrine" implied in the reports of the U.N. and its agencies; namely, the role of government in economic affairs. Professor Spengler suggests that the IBRD missions, whether by instruction or because of the people who happen to be appointed to them, seem to shy away from recommendations involving certain types of government action—types which Spengler would apparently not exclude. Professor Mikesell points out that an activist role for government is given in the very terms of reference supplied to U.N. economists. While he does feel there may be a need for government investment in the social overhead sectors and even in certain industries in underdeveloped areas, he is unhappy about proposals for resource allocation, investment direction, and foreign trade control, and particularly so since the governments themselves may not be developed enough to "administer these with any degree of rationality or efficiency." Spengler on the other hand asks why "the contribution that appropriately conceived and satisfactorily administered exchange and related controls (e.g., quantitative restrictions, multiple exchange rates, quotas) can make to . . . development is inadequately treated in most of the [IBRD] reports." Why not more attention to the possibility of infant-industry protection; why not more shunting of investment into productive channels; and so on?

But this ghost has been adequately exorcised. We would all agree that the present situation in the underdeveloped areas cannot be attributed to the meddling of governments spurred by U.N. economists. This situation developed over a long period of years, over much of which our economic world approximated reasonably well the world of our economic texts. Nonetheless, there is a problem of development in these lands: per capita income is very low absolutely and relative to levels in the rest of the world. Action is needed by government, by international bodies, and by private entities spurred perhaps by some types of inducements. And the action needs specific country prescriptions—along the lines of the detailed work of U.N. groups and of course of the IBRD country missions. The real question is whether economists like ourselves, trained in the workshops of the developed world, are really perceptive enough when we participate in such U.N. or IBRD activities to prescribe the necessary remedies for today's underdeveloped area problems. I stress today's because I am not certain about the relevance of historical parallels. We must admit that it has been difficult for us to formulate an extension of our theory to handle the problem of growth, despite the many cases of past development. (Perhaps, however, this is less a matter of the irrelevance of the historical experience than of the unavailability of adequate information about this experience.)

My earlier reference to the need for specific prescriptions notwithstanding,

I would like here to touch upon some general characteristics of economic life in today's underdeveloped areas. These apply primarily to the rural areas—the largest sector of the economies—and help explain why traditional doctrines may not be too pertinent. They are presented in general; so there are doubtless many exceptions among the underdeveloped areas. And they are certainly debatable. Moreover, they have received little attention in the reports of the U.N. and of IBRD missions.

My first point deals with supply responses in underdeveloped areas and in particular with the changes of output, over a relatively short period, in response to the stimulus of price or income variations. We observe little response and say that supply elasticities are zero or at any rate low. From this we impute the importance of fixed elements in the cost function and of supply limitations on input factors. The remedy tends to be additional investment in some form. Another possibility, of course, is simply that our type of response relationship has little meaning in the rural areas of many underdeveloped countries. At any rate, the same collection of input factors that accompany the zero elasticity in these areas would probably provide more elastic results in more developed lands.

Consider a food deficit country in which the average level of consumption is very low. This was typical for many underdeveloped areas, especially during the recent past when these countries were using scarce foreign exchange to compete for relatively expensive food supplies in a world of food shortages. Presumably, therefore, there existed considerable economic incentive toward expanding food output at home. Yet supply tended to remain inelastic. Rural labor was abundant and, since the social costs of this labor were much higher than its marginal product, it was so endowed that any increment in output from increased use of the labor made good economic sense. In addition it should be noted that the spread between labor's cost and labor's product was frequently borne directly by the entrepreneur from whom increased output might be expected. With respect to other inputs, additional land was generally available; better techniques of production were always being used somewhere in the area. If small investments were needed, as in some types of land clearance, canal improvement, etc., the underemployed labor might be used. Moreover, as I indicate below, real savings usually exist in these rural areas so that it is possible to undertake even more extensive types of investment. In these circumstances, I suggest, we might well expect appreciable expansion in output, given the favorable demand situation; at least we might expect it in the economies with which we are most familiar.

I certainly do not mean to imply that, because I believe that a different result would ensue in the developed countries, the solution for the underdeveloped areas is an easy one. It seems clear that for these areas we need a better understanding of incentives. The answer is not necessarily additional investment, as one might at first anticipate. There may be need for additional investment, but it is unlikely that this alone will stimulate the expansion needed. Again, the problem concerns motivations in a society important sectors of which do not seem to respond to the stimulus of price and income variations.

Inelasticity is of course less characteristic of areas where commercial crop production is more important than production for local consumption. This suggests the important role of monetization which is usually (though not necessarily) associated with such commercial output.

My second illustration concerns saving and investment in underdeveloped areas. We are accustomed to deal with savings almost exclusively in money terms; similarly, it is an investment function in money terms which we use in the determination of net investment in our usual models. We are also familiar with problems of hoarding and of savings for speculative purposes, both of which may involve changes in inventories of real goods. I think we are much less familiar with savings which go more or less directly into investment in order to expand capital plant but where the entire transaction is in kind. Such saving in kind is apparently a real and important phenomenon in underdeveloped areas. Its existence can be inferred from the size of the nonmonetized sectors of some economies and from the difference between the investment component of national income (a significant part of which is imputed) and all the money savings that can be traced through the capital markets, government deficits, etc. Problems of saving in kind have been receiving increased attention in the writings of the economists in underdeveloped areas. Moreover, it seems likely that these savings are not invested in accordance with some principle of maximizing the present value of discounted future income streams. Rather they are apparently used to expand output more or less steadily over time in an effort to maintain consumption levels for future populations. This last suggests that such savings may have been quite large, given the population growth in economies where there is an important nonmonetized sector and the maintenance, more or less, of per capita consumption levels.

This problem of the existence of two types of savings within an economy and of the shift that under some circumstances may occur between the two—even when the over-all degree of monetization is not changing—suggests such possibilities as simultaneous inflationary and deflationary influences in different sectors of underdeveloped areas. Here, however, I am simply pointing out that the difference in form of saving and the difference in the motivations which govern its investment may not only make our calculations of the actual levels of saving difficult but may also result in underestimates of the contribution of savings to capital formation of some kind. Even though all the savings are being invested, however, it may well be that the actual level of real savings in the underdeveloped areas may in fact have permitted capital formation in more effective forms, such as might occur if the entire underdeveloped economy was monetized and if the inhabitants of these underdeveloped areas calculated as our economic man is supposed to calculate. It is interesting to observe, for example, that the Indian Five-Year Plan program presents investment plans for only a part of the total savings of the Indian economy. While the residual savings and investment, a significant part of which may be done in kind, play a role in the plan, little is known about them. In particular, it is not known whether these residual savings and investment are characterized by the relatively low capital-output ratio needed for

rapid growth in national income over the next five years. In formulating recommendations for development, we must obviously know more about savings in kind and more about what motivates their investment—problems with which we have little experience.

I suggest a third such characteristic somewhat more hesitantly, primarily because its problems are perhaps more familar to us. Many underdeveloped areas might appropriately be considered to comprise at least two distinct sectors. There is the advanced urban area, with modern industry, modern entrepreneurs, and significantly higher income levels. There is the much larger rural area, to important parts of which the advanced sector is as remote and foreign as are metropolitan centers in other countries. The flow between the two sectors is frequently small, not only in goods and services, but even in people (given the degree of rural underemployment and the better incomes of the urban areas). Perhaps this is partly the familiar immobility of rural populations, although in most underdeveloped areas this immobility is doubtlessly increased as a result of the strength of the rural family complex. But the barrier between the two sectors is also related to the degree of monetization, to the insensitive marketing channels through which much of the trade and finance move, to the illiquid form of savings, and to the peculiar nature of supply responses—factors to which we have already had occasion to refer. Insofar as there is a real frontier between rural and urban sectors, specific action to penetrate it may be needed, if expanded investment, especially in urban industry, is to accelerate the rate of economic growth. Parenthetically, I might remark that I think this barrier is still a formidable one in Mexico. Despite the fact that, at least in my opinion, its existence has great significance for Mexican development in the years ahead, it is not even mentioned, I believe, in the excellent IBRD study on Mexico.

If these characteristics (and perhaps others of a similar nature) are important in underdeveloped areas, we certainly must be careful about criticizing IBRD and U.N. reports because they suggest tools which do not appeal to some of us, given our type of economic experience. The appropriate economic doctrines for their work may indeed lie in the desired expansion of our theory so that it more adequately handles problems of growth in the underdeveloped areas. As of now, work in progress toward this expansion can be put in two major categories, the one emphasizing the importance of external economies and the other focusing on a broader social science approach in which we would handle motivations supplementary to those of our economic man. The one points up the need of large social overhead investment and the provision of external economies if we are to spur increased investment. Its emphasis is the creation of more favorable economic investment conditions in the underdeveloped areas. If my illustrations have merit, this emphasis must clearly be supplemented. For in important sectors, the existence of economic conditions conducive to investment need not bring about such investment. Other incentives may have greater importance. Motives, felt needs, and so on—these must be understood; these could perhaps contribute a considerable expansion in product even without additional investment. An interdisciplinary theory should be able to provide answers,

but I presume these answers will not be available in the near future.

In the meantime, I would certainly hope that the IBRD and the U.N. work to uncover, in the areas in which it concentrates, as much information as possible about problems, like those suggested above, which do not seem readily amenable to our tools of analysis. New insight is needed into what might encourage an entrepreneurial spirit. (The suggestion that the technical competence of missions be broadened to include members of other social sciences would seem to have great merit.) This emphasis on motivations is not an incidental one in the underdeveloped areas; it may be fundamental to the validity of the missions' conclusions. Pending the development of an adequate body of theory, we must certainly encourage the IBRD and U.N. technicians to be imaginative and daring in their recommendations. The lack of adherence to accepted principles is probably less important than the presentation of a logical and well-documented argument in support of courses of action.

Finally, I would like to make one comment upon the ends we seek in underdeveloped areas, as distinct from the means and tools which have dominated this discussion. We have pointed up the problem of entrepreneurship, or at any rate the differences that may exist in the motivations which are important in the economic life of underdeveloped areas. While we all recognize, and perhaps regret, that such motivations may not result in the most efficient use of resources, it need not follow that a rapid change in these motivations is a precondition for development. I can scarcely agree with Professor Spengler's statement that "it is necessary that the social, political, legal and ethical structure of a lagging underdeveloped country be so transformed" that the country would maximize savings and convert them into "essential and productive equipment." Quite apart from the fact that this transformation can only be a very slow one, it is conceivable to me that there may be points at which further increases in economic efficiency may be bought at a price which is too high in terms of social, political, legal, and cultural changes. Indeed, in such conditions, equilibrium at a lower economic level (though obviously above present levels) may be a more stable one and may provide a firmer basis for continued upward movement.

THEO SURÁNYI-UNGER: As a common denominator of the economic doctrines implied in the reports under discussion, Professor Mikesell correctly points out an emphasis on governmental planning at the expense of theories depending on the price system alone. I propose to comment on his consistent application of this viewpoint to the promotion of full employment, stability, long-run development, and international equilibrium. Professor Spengler refers only in a peripheral way to the "planning and co-ordination of developmental activities at the state level" which the reports suggest, and to "a strong state-administered system of controls" which "some students of the development process" consider.

My comments are aimed at answering three fundamental questions. First, how far do the recommendations submitted in the reports go along the lines of governmental economic planning; second, in what sense do these recom-

mendations actually differ from "traditional" Western and Eastern economic theories; and, third, how are the recommendations likely to affect the present controversy between Eastern and Western economic theories?

The significance of the first problem obviously pertains to the difference between partial governmental planning of the Western pattern and Eastern trends of total collective planning. This difference has complex quantitative and qualitative aspects which are rooted in difficult and challenging problems of economic analysis. The difficulties of measuring the quantitative and classifying the qualitative differences are well known. However, even a modest attempt at surmounting such difficulties may help to recognize the direction in which the influence of the United Nations and the International Bank is guiding the economic development of underdeveloped countries.

With respect to the quantitative aspects of "programming" and planning, it is essential that several reports tend to recommend an increasing ratio of planned investments to gross national product. In the aggregate amount of planned investments, the ratio of governmental to private investments often displays a similar tendency to increase. The increase refers to a comparison of initial and recommended magnitudes in such long-term projects of economic development as designed by the recent missions of the International Bank to Iraq, Ceylon, Colombia, Guatemala, Nicaragua, Jamaica, Surinam, etc.[1] It is understood that such reports reflect the opinions of the particular general-survey missions rather than the standpoint of the International Bank and, accordingly, result in a fairly wide range of different ratios. Nevertheless, most of the fundamental ideas conform to the general principles elaborated and adopted by the United Nations and by the closely co-operating independent agencies. In addition to national and regional governmental plan-

[1] Although Professor Spengler analyzes capital formation rather than investments, the two ratios can also be derived from the figures of his Table 2 (and *passim*) concerning Nicaragua, Guatemala, Colombia, Jamaica, Surinam, and Ceylon. With regard to the computation of such ratios and to the subsequent references, see *The Economic Development of Iraq* (International Bank for Reconstruction and Development, Johns Hopkins Press, 1952), pp. 72 ff. and 85 ff.; *The Economic Development of Ceylon* (International Bank, Johns Hopkins Press, 1953), pp. 109, 112 ff., 124 ff., and 140 ff.; *The Basis of a Development Program for Colombia* (International Bank, Washington, D.C.), pp. 22 ff., 44 ff., 356 ff., 593 ff., 599 ff., and 606 ff.; *The Economic Development of Guatemala* (International Bank, Johns Hopkins Press, 1951), pp. 10, 85 ff., 252 ff., 282 ff., and 293 ff.; *The Economic Development of Nicaragua* (International Bank, Johns Hopkins Press, 1953), pp. 8 f., 14 f., and 74 f.; *The Economic Development of Jamaica* (International Bank, Johns Hopkins Press, 1952), pp. 130, 134, and 143 ff.; *Surinam: Recommendations for a Ten Year Development Program* (International Bank, Johns Hopkins Press, 1952), pp. 23, 37 ff., 42 ff., and 76 ff.; *Measures for the Economic Development of Under-Developed Countries* (United Nations, Department of Economic Affairs, New York, 1951), pp. 17 ff., 47 ff., 71 ff., and 93 ff.; *Formulation and Economic Appraisal of Development Projects* (United Nations, 1951), Vol. I, pp. 16 ff., 55 ff., 102 ff., 107 ff., 171 ff., 287 ff., 310 ff., 324 ff., 349 ff., and 447 ff.; *Economic Survey of Asia and the Far East, 1951* (United Nations, 1952), pp. 124 ff. and 264 ff.; *Mission to Haiti* (United Nations, 1949), pp. 104 ff.; *Relative Prices of Exports and Imports* (United Nations, 1949), pp. 16 ff. and 121 ff.; *Summary of Recent Economic Developments in the Middle East, Supplement to World Economic Report, 1950-51* (United Nations, 1952), pp. 13 ff.; *World Economic Report, 1949-50* (United Nations, 1951), pp. 36 ff.; *Eighth Annual Report to the Board of Governors, 1952-53* (International Bank, Washington, D.C., 1953), pp. 9 ff.; *Annual Report to the Executive Directors, 1950* (International Monetary Fund, Washington, D.C.), pp. 24 ff.; Jacob Viner, *International Trade and Economic Development* (The Free Press, Glencoe, Illinois, 1952), pp. 50 ff. and 120 ff.

ning, a stress on international economic planning is revealed by some increasing ratios of foreign to domestic capital in the development projects which the reports recommend. Substantial participation of the International Bank and other international agencies is frequently stressed. With regard to this international planning, the public sector also tends to expand; the numerical differences among the countries concerned are substantial; yet the basic principles are approximately the same. Although any computation of the three above-mentioned sets of ratios is jeopardized by methodological pitfalls, the over-all quantitative trend toward more governmental economic planning may often be recognized.

In a qualitative sense, two groups of recommendations should be distinguished in the various reports. The first group refers to relatively mild measures of conventional governmental action in the field of agricultural, industrial, commercial, monetary, credit, and fiscal policies aimed at raising the real per capita national incomes, securing satisfactory levels of employment, and reducing harmful discrepancies in the income and wealth distribution of underdeveloped countries. In this group, hundreds of pages are usually filled with the description of primitive conditions and with suggestions concerning an efficient adoption of well-known principles long practiced in the developed countries. Such principles embrace mechanized farming, rationalized forestry, rapid development of manufacturing and mining industries, modernized transportation, communication, domestic and foreign trade, more refined tariffs improving the balance of trade and payments, better banking and credit organization, and up-to-date taxes as tools of anti-inflationary and budgetary guidance.

While this first group of recommendations does not directly interfere with the over-all market mechanism, the second group tends to affect the allocation of resources based on a price formation of the supply-and-demand and private enterprise pattern. Credit controls, foreign exchange controls, various priorities, licensing of buildings and capital extensions, and other governmental measures influencing the direction of investment are typical examples of the second group. A similar tendency results from terms of foreign trade shaped by ceilings and other governmentally fixed prices of imports and exports. As soon as the reports recommend such planned improvements of the terms of trade at the expense of the classical principle of comparative advantages and other devices of governmental planning for the allocation of resources, the nerve center of the entire market economy is jeopardized.

As to their connection with "traditional" Western economic theories, the above-indicated recommendations of the reports reveal old reminiscences as as well as more recent links. Among the former, three avenues of influence are evident. First, neomercantilistic ideas of regimented industrialization and improved balances of trade are frequently presented in the disguise of modern macroeconomic terminology. Second, the old classical doctrines of market freedom and private enterprise competition are respectfully remembered; yet they are often relegated to the retired list. Third, the neoclassical approach is retained by a recurrent stress on marginal magnitudes and other interrelations rooted in short-term microecononic analysis. However, such older view-

points are mostly overcast with the following fourfold influence of modern economic theories: (1) the Keynesian distinction between mature and immature economies, between full and less-than-full employment with respect to equilibrium, and between macroeconomic propensities to consume and to invest; (2) the emphasis of the new welfare economics on such cardinally nonmeasurable magnitudes as aggregate and marginal social productivity and social welfare; (3) the theory of long-term economic growth with regard to a dynamic consideration of developmental possibilities in the distant future; (4) a certain understanding for those propositions of the socialist "competitive solution" which recommend a fairly comprehensive scope of governmental planning on the basis of free consumer choice. Several reports are marked by an eclectic attempt at harmonizing these multifarious links and impacts. Yet only a forced and artificial interpretation could try to establish any ordinal sequence of significance among the four trends of modern influence.

A likewise distorted interpretation would be required for assuming any essential connection between the partial governmental planning suggested by the reports and the theories of Eastern collective economic planning. The suggested planning for material production, distribution, and consumption in underdeveloped countries displays only some terminological—or at most structural—resemblance to the doctrines of collectivistic physical planning. Of a similar superficial nature is any affinity of the recommended macroeconomic planning for such value aggregates as national product and income, disposable personal income, capital formation, productivity, and for monetary equilibrium, on the one hand, and the theories of Soviet value planning on the other hand. In terms of differences, it is important that all reports under discussion retain a friendly attitude toward the future development of private enterprise. However, Professor Spengler overrates the significance of this attitude by referring, a few times, to what the missions ought to have suggested rather than to what they actually recommend.

Nevertheless, the reports have contributed toward attenuating the bitterness of the controversy between Western and Eastern economic theories. Inasmuch as the recommendations go at least part of the way leading from a one-sided defense of private enterprise and market freedom to planned forms of governmental economic action, they are prone to facilitate some understanding of more comprehensive patterns of collective planning. At the same time, this development results in a meaningful contradiction between the current operation of the United Nations and its fundamental structure.

Several reports display some effort to direct the operation of important international economic organizations against those economic doctrines which Professor Mikesell presumably means when using the adjective "traditional"; i.e., the theories of partial and general equilibrium derived exclusively from the supply-and-demand forces of price formation. In other words, the missions submitting such reports tend to object implicitly to those Western economic theories which have most sharply criticized and fought the Eastern doctrines of collective economic planning. By doing so, the missions have tried to conform to the formal postulates of world-wide co-ordination currently advocated by the United Nations in the domain of economic thinking. However, the

fundamental structure of the United Nations is designed to maintain the private enterprise and market economy by the help of a powerful majority vote. Although the Soviet Union cannot hope to succeed in making this structure subservient to any revolutionary, world-wide acceptance of collective economic planning, it is still willing to tolerate the cold war atmosphere secured by such a machine as long as neither perfect peace nor all-out war appears to be feasible. In the meanwhile, Soviet dependence on the veto power is apt to slow down inconvenient activities of this machine, while perpetuating its existence on the basis of a *status quo*.

The purport of partial planning recommended by the reports is clearly brought into prominence when combined with the events which have taken place in the Soviet orbit since the summer of 1953. If the national governments of that orbit carry through at least some of their recently announced plans for concessions to consumer choice and private enterprise efforts in production and distribution, a weakening of some of the most deeply rooted economic disputes between West and East may ensue.

GERALD M. ALTER: I shall devote my comments to Professor Spengler's paper on the International Bank's general survey reports. Although the views I express here are only my personal opinions, I do feel that the Bank should congratulate Professor Spengler—as well as commiserate with him—for his careful reading of some 5,000 pages contained in the ten Bank reports. We are all in debt to Professor Spengler for his interesting and well-balanced summary and appraisal of the reports.

Professor Spengler raises some important questions, many of which I do not feel competent to discuss. I share with him the concern that not all matters worthy of attention are receiving it. On the other hand, the criticism can also be made that many matters not worthy of attention may be receiving too much. Since the Bank reports are viewed primarily as action documents, many difficult judgments must be made by the missions in order to identify barriers to economic development which are of substantial importance and at the same time subject to corrective action by conscious policy measures. My own feeling is that some of the reports give too much attention to detailing the methods which agricultural and industrial enterprises in various fields might adopt to increase productivity and too little attention to the structural changes which will elicit the proper entrepreneurial response.

This is, however, a particularly difficult problem in view of the lack of a strong entrepreneurial and managerial class, either in the private sector or in the government sector, in some of the countries covered in these reports. In this respect, I find it difficult to agree with Professor Spengler when he implies that the reports rely on a simple faith in private enterprise. In particular, I feel that he does not correctly interpret the views expressed in the two reports on Middle Eastern countries (Turkey and Iraq). I fail to see that, "in the Turkey report, the rise of *étatisme* is traced, not to the fact that in Middle Eastern societies private and responsible initiative did not flourish, but to the failure of domestic private enterprise to meet speedily enough the demands

made upon it by Ataturk." Chapter I of the report on Turkey contains a detailed discussion of why private and responsible initiative did not flourish in the Ottoman era. Moreover, I question that the mission reports dealing with the Middle East rely, as exclusively as Professor Spengler implies, on private enterprise to generate the forces of economic development. Chapter III of the report on Iraq emphasizes the role which government will have to assume: ". . . industrial development in the immediate future will have to depend very largely upon the initiative or financial assistance of the government."

Although I may here be misinterpreting Professor Spengler's views on the Bank reports, I suspect that his desire to place greater emphasis on the limitations of private enterprise is closely correlated with his suspicion that the missions tend unjustifiably to favor agricultural as opposed to industrial expansion. I find it rather difficult to understand Professor Spengler's criticisms in this respect. He states that the problems attendant upon the mobilization of an economy's underutilized resources do not receive enough attention in the reports and then proceeds to indicate the circumstances under which it is not justifiable to emphasize agricultural development. He states categorically that it is not permissible to emphasize agricultural development in an economy nearly four-fifths of whose labor force is attached to agriculture. I question that the percentage of the labor force now attached to agriculture is decisive. Market prospects, at home and aboard, availability of labor and managerial skills, availability of raw materials and fuels, and many other factors must be taken into account in order to judge the relative emphasis which should be placed on expansion in the different economic fields. In general, I feel the survey reports do appraise, with varying degrees of technical skill, the complex set of factors that must be taken into account. I should agree that in some mission reports not all of the arguments given in favor of more emphasis on agriculture are consistent (see, for example, Report on Turkey, page 57, in which it is implied that agricultural development is important in order to reduce surplus manpower in agriculture and also to provide employment for the growing labor force). However, in view of the complexity of the factors that must be taken into account in determining how much emphasis should be given to agricultural development in a program for a particular country, I wish Professor Spengler could have commented on the positions taken in specific reports. For example, in Jamaica population density is higher than in any of the other countries covered in these reports and unemployment is estimated at between 18 and 20 per cent of the labor force. This might suggest that the potentialities for agricultural development compared to other lines of activity are quite limited. Yet after what appears to be a careful weighing of alternatives, the mission formulated a program on which it comments as follows: "Most of the expansion of production and employment we foresee will result directly or indirectly from the development of agriculture. Contrary to widely prevalent belief, we are convinced that the potentialities of agriculture in Jamaica are far from exhausted." A real question remains: are our techniques for appraising the future relative costs and benefits of expansion in different fields adequate, and can the practical limitations—such as

lack of entrepreneurial, managerial, and labor skills, as well as market prospects—be objectively appraised in each of the different fields of economic activity?

Similar questions arise at the level of aggregate investment and output. Professor Spengler has prepared a very interesting table showing the rates of capital formation and rates of growth in output expected under the programs. He states that the rates of capital formation are adequate only if certain growth rates in output are achieved. While I personally agree that this is one of the legitimate tests of "adequacy," it is only fair to remind Professor Spengler that practical limitations on the side of resources, skills, etc., may limit the rate of investment and the rate of growth, at least for a time, even if resources could be made available for supporting a higher level of investment. Thus, when he finds that a number of the capital formation rates would appear to be inadequate to permit much more than a counterbalancing of population growth, does he also imply that in the country concerned—Ceylon, for example—the mission was unduly impressed with the practical difficulties of raising investment levels and of effectively employing investment? It should also be noted that the rates of growth which have been already achieved in some of the countries included in these surveys have been substantial.

Professor Spengler, in commenting on the rates of growth in output which the missions project, finds that in at least four of the reports the expected rate of growth is not warranted by the projected rate of investment. He appears to feel that the incremental capital-output ratio cannot be expected to fall below 3.5:1, and that many of the mission reports assume substantially lower ratios. I share in part Professor Spengler's misgivings on this score. Yet it must be recognized that historical data are accumulating on rates of growth in output and rates of investment which may support the thesis that incremental capital-output ratios substantially below 3.5:1 may be feasible, at least for periods of five to ten years. I refer in particular to the historical analysis in the Mexican and Colombian reports of the Bank and to the studies which the Economic Commission for Latin America have published. One should not depend on the permanence of such favorable capital-output ratios. It would certainly be advisable for countries enjoying them to raise rates of domestic savings so that satisfactory rates of growth could be maintained.

# CORPORATE INTERNATIONAL INVESTMENT POLICIES AND PROGRAMS

## INTRODUCTORY REMARKS

*By* J. B. Condliffe, *Chairman*

The capitalistic, free enterprise world of the nineteenth century centered in the London money market. An American economist once stated this fact by saying that "everything that came to London became liquid, and everything came to London." The currents of world trade flowed into and out of the Pool below London Bridge. All over the world, in remote places, feeders and tributaries fed into these trading currents. Counterflows of payments carried the means of capital development, as well as consumption goods. It was not till London's maritime, colonial, trading, and investment dominance began to be challenged about the turn of the century that the stream of payments became sluggish and sticky. As long as the cosmopolitan merchant-bankers who owned the Bank of England were able to control the flow of credit by adjusting interest rates in a complex series of interconnected markets, trade was geared to payments and investment to both. International transactions of all kinds—commercial and financial, long and short, real and speculative—moved smoothly and were combined with domestic transactions in a bath of credit.

Little is left of this private enterprise system by which the web of nineteenth-century commerce and finance was woven. Leadership in the technical arts of production has moved across the Atlantic. The manufacturing corporations in which that technical leadership is largely vested are not as dependent upon financial accommodation from banking institutions as were the smaller scale traders and manufacturers of Victorian England. They tend to be self-financing, setting aside from their earnings the necessary reserves for expansion.

New forms of import and export as well as new forms of investment are developing. It is not possible now to feed odd lots of heterogeneous materials into the standardized processes of mass production. The industrial chemist finds synthetic substitutes for many natural products. On the other hand, it is often economical for a great corporation to export its immaterial assets rather than its material products. An industrialist once expressed this fact by asking me whether I did not agree that in future there would be less international and more foreign trade. By international trade he meant the sale of products fabricated in this country. By foreign trade he meant the sale of products fabri-

cated abroad by processes supplied from this country. Sometimes there is actual investment, with or without the participation of local capital. Often, nowadays, the corporation contracts to supply patented knowledge, organization, and know-how rather than funds or equipment. Sometimes this is done for a fee. Sometimes it becomes an investment.

It is true that a large proportion of international trade and payments still follows the traditional pattern of an exchange of food and raw materials against manufactures. The commodity composition of trade as well as its direction has changed considerably in the last half-century. But it is still true that all but a few countries find that their comparative advantage lies chiefly in the export of food and raw materials.

One of the dislocating factors in the international situation is that capital for development is not supplied to these food and raw-material exporting countries in any very clear relation to their trade. They particularly need capital for basic development—for educational expenditures and for such public works as transport in all its forms, public utilities, dams for power and irrigation. There is no central money market through which payments on account of current trade and of capital transactions can be cleared and integrated. Moreover, the availability of short-term commercial credit to finance the movement of goods, whether for consumption or for investment, is now restricted. Its lubricating effect on all international transactions has largely been lost.

Investment, as well as trading, decisions are made by government officials or by corporation executives rather than by specialized traders. They are not cleared through the credit facilities of a single integrated market. The reasons which prompt these investment decisions are often not closely related either to trade or to international payments. It becomes difficult to put together the payments that accumulate in some areas and the exchange needs even of neighboring areas. The lack of such banking facilities can be seen, for example, in the Near and Middle East where the oil-rich countries around the Persian Gulf have surplus exchange but the Mediterranean littoral is short of funds.

The changeover of international capital movements from banking finance to a combination of government grants and industrial direct investments often tends, therefore, to aggravate rather than correct disequilibria in the balancing of international payments. Much hard thinking needs to be done before the theory of the balance of payments can be adapted to take account of the new forms of investment and of capital movements generally.

The theory of international capital movements itself needs to be restudied. Who provides the real capital which goes into the location and development of a new oil field? For the first time, oil has just been

found in paying quantity in Australia. The importance of the strike is not so much the first yield as the proof it gives of a geological theory that has been disputed. Exploration will now be pushed in other sedimentary beds. It may involve tens of millions of dollars, not much of which will come from the flotation of shares to attract the savings of the public. A larger proportion will probably come from corporation reserves. Dr. McIntyre's corporation, Caltex, holds 80 per cent of the stock in the company which made the first strike. There are many other exploration enterprises, many of which will seek, if they do not already have, American connections. Some, perhaps most, of the capital will be American. Who parts with the purchasing power that will go into drilling rigs and riggers, transport and pipe lines, ultimately into water supplies for an arid region, housing, port development, and similar facilities?

Immediately some of it will come from the stockholders who year by year accept a conventional dividend and watch profits being ploughed back into expansion. Unless currency convertibility can sometime be achieved, they may never reap the fruits of the enterprise conducted in their name. Other economic groups involved are the consumers of petroleum products, the workers in the industry and in rival industries, as well as the taxpayers who must pay more because of the depreciation allowances given to oil companies. The Australian coal miners should not be forgotten. They may find themselves in the situation that John L. Lewis complains about.

But these are only first approaches to an answer. It could be argued that the price of gasoline to the American consumer would have been higher over the years but for the development of alternative sources of supply to our own and other markets; that the stockholder gains more in the long run from a steady dividend backed by large reserves and expanding assets; that the taxpayer's burden would have been greater if fuller collections from the oil companies had inhibited them from expanding in a risky business. The fact is that we are all involved in this Australian, as in other, oil discoveries and in all corporate investment overseas. We may never be able to trace with any exactness the incidence of our involvement. We may perhaps have to rest content with the general benefits that accrue from multiplication of the resources available for world consumption.

These introductory remarks are offered, not to anticipate the arguments of two excellent papers written by men who know whereof they speak; but merely to underline the importance and range of the topic they are about to discuss. I have not ventured upon a critical appraisal of the papers, since two able economists have been entrusted with this duty.

# DIRECT VERSUS PORTFOLIO INVESTMENT IN THE BALANCE OF PAYMENTS

*By* August Maffry
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*Definitions and Limitations.* In what follows, conventional definitions are used. Direct investments are those which involve a significant element of ownership, control, and management. In the language of economics, they are entrepreneurial investments. Although such investments may be made in theory either by corporations or individuals, practically all direct investment in foreign countries of American capital has been investment by corporations. Furthermore, in American experience the preponderance of direct investment abroad in terms either of number of investments or amount of capital involved is fully controlled investment in foreign branches and foreign affiliates of domestic corporations.

Portfolio investment is, on the contrary, noncontrolling investment or, to be precise, investment which involves no important element of ownership, control, or management. It may consist either of equity or of debt, but in American experience has consisted almost exclusively of debt (except for Canadian equities) and, moreover, almost always of dollar debt. In this and other respects, the discussion which follows will be entirely in terms of American experience with foreign investment and with the role of foreign investment in the balance of payments of the United States.

*Portfolio Investment Before 1930.* The heyday of portfolio investment in foreign countries by the United States was in the twenties, with a virtual cessation after 1930. Examples of portfolio investment since 1930 will be considered later. Suffice it for the present to remind that they have been confined to new and refunding loans to Canadian borrowers, a few refunding issues of other foreign borrowers, borrowing by the International Bank for Reconstruction and Development for relending, and some medium-term financing by commercial banks.

The amount of new portfolio investment abroad increased every year from 1919 to 1927 except in 1923, and reached a peak of approximately 1 billion dollars in 1927 and 1928. There was a precipitous decline after the middle of 1928, a brief recovery in 1930, and thereafter very little activity with the exceptions noted above.

In a broad sense, the large volume of portfolio investment during

the period 1919-30 is to be attributed to foreign need and desire for dollar exchange and to the general exuberance of the securities market in the United States. The zeal of issuing houses in bringing out new issues and of bond salesmen in selling them was matched by an apparently insatiable appetite of investors for foreign dollar obligations. Yields were attractively high as compared with those on comparable domestic issues. Many of the borrowers had good debt records or had themselves been lenders to the international capital market. Government and private propaganda in favor of foreign lending was rife. The investing public had confidence in the investment bankers.

In a more detailed view, the volume of foreign bond issues offered in the American market tended to fluctuate inversely with the cost of borrowing. During the four years following the end of the war, borrowings in the United States were chiefly by European countries to finance their urgent postwar import requirements and were made even though rates of interest were high. With the decline in interest rates in 1921-22 and with European capital markets closed, a substantial volume of Latin-American and Far Eastern issues came onto the American market. There followed a brief period of relative inactivity as interest rates rose and as economic developments abroad, especially in Europe, turned distinctly unfavorable.

From 1924 until the middle of 1928, the volume of new foreign issues rose steadily. Conditions in the United States were favorable. A generally high level of business activity was accompanied by an expansion of bank credit and a decline in long-term interest rates. The securities market was increasingly active. The situation abroad was also favorable and at the same time conducive to borrowing in the United States. More settled and more prosperous conditions prevailed in Europe and elsewhere. Progress was being made toward currency stabilization. But capital was scarce, and long-term rates of interest in European markets were higher than those in the United States. Furthermore, these markets, including the London market, were partly or entirely closed to long-term foreign issues.

This combination of circumstances at home and abroad, together with the keen competition for profitable foreign issues among American investment houses, accounts for the high volume of public offerings of foreign securities during the period. The short-run fluctuations are to be explained, as already noted, by the movement of interest rates in response to changes in the domestic business and credit situations. When rates were relatively low and the cost of borrowing by foreigners accordingly reduced, new issues were brought onto the market. When rates were relatively high, issues were held off the market.

The market for foreign securities in the United States collapsed at

the middle of 1928 with the general decline in the bond market. Long-term interest rates were rising, the values of outstanding securities were falling, and investor interest was more and more concentrated on domestic stocks. Political and economic conditions in certain key foreign countries were taking an unfavorable turn, and there were signs of falling markets and business recession abroad. A brief revival of the foreign bond market in 1930 was followed by the first defaults in 1931 and the end of the active period of portfolio investment abroad by the United States.

*Portfolio Investment in the Balance of Payments.* In American experience, portfolio investment abroad has created freely disposable dollar exchange which foreign borrowers could use with wide latitude. This does not mean that there are not to be found examples of tied investments of the portfolio type in which loans were made for defined purposes, including the purchase of specified goods and services in the United States. The usual case, however, was that of a foreign borrower, either a government entity or a foreign corporation, using the proceeds from the sale of dollar securities as it saw fit.

In practice, this meant that portfolio investment was often unrelated to the means of repayment or even unproductive in an economic sense. The foreign loans of the twenties included loans for sterile public works, loans to cover budget deficits, and "general purpose" loans. There were instances of flagrantly wasteful use of loan proceeds. If the amounts involved had been small and if the flow of portfolio investment to the rest of the world had been sustained, perhaps no great or permanent harm would have been done to the process of international investment by the excesses of the period. However, the amounts were large, giving rise to correspondingly heavy debt service, and the movement fell off abruptly in 1928. The shock to the international economy was severe. Foreign countries had their dollar availabilities sharply reduced while their requirements for dollar debt service remained fixed. Portfolio investment abroad had accounted for 20 per cent of the total supply of dollars to foreign countries in 1927 and 1928. The decline in this capital movement after the middle of 1928 accounted in turn for 20 per cent of the drop in the total supply of dollars to the rest of the world from 7.4 billion dollars in 1927-29 to 2.4 billions in 1932-33. The maintenance of contractual debt service to the United States of 900 millions annually was, of course, impossible in the face of these developments, and defaults became inevitable.

*Portfolio Investment Since 1930.* Portfolio investment by the United States in foreign countries since 1930 has been relatively insignificant. New and refunding Canadian issues are offered in accordance with the

needs of Canadian borrowers and money market conditions, but American investors consider them to be in a category apart from other foreign securities. There have been a few refunding issues, and a very few new issues, of borrowers other than Canadian.

Beginning in 1947, the International Bank for Reconstruction and Development has sold its obligations in the United States in order to raise dollar funds for relending abroad. These obligations, although technically foreign securities, are guaranteed by the United States government up to the amount of 2.5 billion dollars, as compared with 643 millions outstanding as of December, 1953. For this reason, as well as because of the Bank's assets, conservative policies, and reputable management, International Bank bonds have been readily taken up by American institutional investors, including savings banks and insurance companies, and also by individual investors.

It is perhaps difficult for persons outside the financial community to understand the almost complete present lack of interest in foreign securities (other than Canadian and World Bank obligations) in the capital market. This lack of interest applies to investors and investment houses alike: one reinforces the other. Not even governments which are most creditworthy on the basis of outstanding debt, debt record, and dollar position can borrow at long term or, in fact, borrow at all except by way of short-term bank credits or on a fully secured basis. With rare exceptions, the same is true of nongovernmental borrowers. The Israeli dollar bonds now being sold in the United States constitute a special case, since the appeal to investors is on a sentimental as well as an investment basis.

For all practical purposes, the function of portfolio investment abroad by the United States has been shifted, apart from investment in Canada, to the International Bank and to the Export-Import Bank. The Export-Import Bank since 1945 and the International Bank since 1947 have made aggregate loans to foreign borrowers of 5.6 billion dollars. The annual rate of lending through these institutions is comparable in absolute terms to the rate of lending during the twenties through publicly-offered foreign issues but has constituted a much smaller percentage of the total supply of dollars to foreigners than was the case during the earlier period. There are other differences to be noted. The development loans of the World Bank and Export-Import Bank are for carefully defined productive purposes, usually of a kind which will contribute directly or indirectly to the means of servicing the loans. The dollar debt service involved now represents a relatively small charge on current world dollar availabilities as compared with the heavy charge built up in the twenties. In the interim, of course, dollar debt service on older

issues has been greatly reduced by repayments, repatriations, defaults, and adjustments under debt settlements, while dollar availabilities have greatly increased.

*Direct Investment.* American direct investment abroad took place on a significant scale even before the first World War. It was substantial also in the twenties but not as large in dollar terms as portfolio investment during the period. The amount of portfolio investment in the years 1919-30 was 8.3 billion dollars, as compared with 3.3 billions of direct investment, including, in the latter category, issues of domestic corporations for investment abroad. The annual volume of direct investment abroad reached its peak, along with the general business boom, in the years 1928 and 1929, in each of which the amount approximated 600 million dollars. This movement of corporate capital to foreign countries during the period, like the movement of portfolio investment, is to be accounted for by the general expansionist sentiment of the time and, as a technical factor, the great activity in the securities market which made it possible for American corporations to offer securities at home to raise capital for employment in foreign countries.

Direct investment fell to small volume after the onset of the Great Depression and recovered but slowly during the thirties. Then, after the interlude of the second World War, direct investment abroad came again to significant proportions. The amount has ranged during the period since the last war between 700 million dollars and 1,700 million annually, including the reinvestment of earnings in foreign countries. The dollar amounts involved are comparable with the total volume of American private investment abroad, both direct and portfolio, during the twenties. In the earlier period, portfolio investment predominated; in the period since the recent war, direct investment has been by far the more important.

Direct investment, by contrast with typical portfolio investment, may or may not create disposable dollar exchange. If the investment is in the form of equipment shipped from the United States, it obviously does not. On the other hand, if it involves dollar expenditures for local labor and materials, it obviously does. No generalization from American experience would seem possible as to the proportions of these two forms of direct investment.

*Dollar Exchange from Foreign Investment.* With reference to both portfolio and direct investment abroad, there are greatly exaggerated ideas current of the extent to which the capital movement involved can serve an important or lasting function in providing dollar exchange to meet the requirements of foreign countries for imports of dollar goods and services. Portfolio lending does typically create dollar exchange but, since it is almost entirely on a contractual basis, sets up an immediate

return flow of debt service for interest, sinking fund, and amortization. As the amount of such debt service grows with the volume of outstanding portfolio investment, it must soon overtake the amount of new investment, so that on balance there is no net contribution of dollar exchange to foreign countries.

On the other hand, direct investment, which may or may not create dollar exchange at the time it is made, is predominantly equity investment entailing no fixed return. Nevertheless, direct investment, if successful, generates a return flow of investment service. The major differences between portfolio and direct investment at this point are that service on portfolio investment is contractual and fixed, whereas service on direct investment is not only variable but may fluctuate roughly in accordance with the dollar availabilities of host countries. This is demonstrably true in the case of those direct investments, now of major importance in American experience, which involve the production of raw materials for export to the United States and the world market generally. The product of the investment provides the means of transferring earnings, and the two will typically rise and fall together.

Historically, this distinction between portfolio and direct investment was most strikingly exhibited with the onset of the Great Depression in 1930. The fixed charge on the dollar availabilities of foreign countries constituted by service on dollar debt became insupportable as the supply of dollars to the rest of the world dropped precipitously. During the same period, the return on American direct investments abroad was severely reduced, largely because the investments themselves produced much lower returns or no return at all. In many instances, indeed, it was necessary for the owners of direct investments in foreign countries to send funds abroad in order to cover the operating deficits of foreign branches or subsidiaries.

There are other significant, although perhaps commonplace, differences between direct and portfolio investment. Direct investment usually carries with it technology and elements of management, whereas portfolio investment is rarely associated with technology and, by definition, not at all with management. This difference is largely responsible for the fact that direct investment is almost always productive investment in an economic sense, whereas portfolio investment, at least in American experience, has often not been so. Furthermore, direct investment, as already noted, is usually related in practice to the means of repayment. This is manifestly true of investments in the production of raw materials for export from foreign countries. It is generally true also of investment in manufacturing operations abroad because the products manufactured displace imports, or are exported, or both. On the other hand, direct investments in power facilities, transportation facilities,

and other facilities yielding services which are not either imported or exported have no connection with the means of servicing them. Direct investments in such facilities are now unimportant among new direct investments of American capital in foreign countries. One of the reasons for this is, no doubt, their disassociation with the saving or earning of foreign exchange.

Direct investment, if successful, generates additional investment by way of the reinvestment of earnings. The importance of this reinvestment is indicated by comparative data on additions to American direct investments abroad since the end of the recent war by capital transfer and reinvestment of earnings, respectively. Additions to direct investments by capital transfer totaled 4.4 billion dollars in the years 1946-52. Additions to direct investments by reinvestment of earnings of the foreign subsidiaries of American corporations (there being no corresponding statistic for foreign branches) amounted to 3.8 billions during the same period. Thus, direct investment is not only permanent investment, by and large, but it also multiplies itself through the plowing back of earnings. This reinvestment of earnings abroad has the effect, of course, of reducing the amount of investment service transferred across the exchanges and is the equivalent, from the point of view of the balance of payments, of a capital transfer from the United States to foreign countries.

By contrast, portfolio investment, which in American experience has consisted almost entirely of debt rather than equity, is, in the nature of the case, investment subject to contractual payments of interest and repayments of principal. The consequences for the balance of payments have been already described.

Another basic distinction between direct and portfolio investment lies in differences in motivation. Portfolio investment is made on a calculation of return versus risk in comparison with investment opportunities at home. This fact goes far to explain, together with the painful experiences of the thirties, the present apathy of American investors towards foreign securities. Heavy taxation both on income and capital gains has the effect of reducing the possible return on foreign securities to relatively small proportions, while the risk of loss of income or of capital is generally rated high in a world economy beset by political instability, international strife, and all manner of economic dislocations. At the same time, the return on good domestic securities continues attractive and involves minimum risk.

Direct investments in foreign countries are not made except in anticipation of their yielding a profit. However, unlike portfolio investment, a contemplated direct investment may not be expected to yield a profit as a separate and isolated undertaking but to do so only in combination

with other foreign and domestic operations of the investor. A large percentage of direct investment since the recent war has gone into the extraction, transportation, and processing of raw materials, especially oil. The large amounts of capital invested have been forthcoming because corporate investors were impelled for business reasons to find and develop sources of raw materials outside the United States. This compulsion was born in turn out of a desire for diversification of sources, a desire for sources outside the dollar area, and a desire not to lose relative position in an industry by failing to participate in the exploitation of important new sources of raw materials. It happens that direct investment in the production of primary materials has been quite profitable during the postwar period, but the large-scale investment abroad in the raw material field cannot be explained on this ground.

Additional large direct investments abroad have been made since the the last war in manufacturing facilities in foreign countries. Here, again, the considerations involved are primarily business motives as opposed to investment calculations. American corporations have gone extensively into manufacturing operations in order to retain or gain markets which would otherwise be closed to them because of trade and exchange restrictions. In many instances, the managements of these corporations would have preferred to manufacture in the United States and export to foreign markets, but this choice was not open to them. They either manufactured abroad or lost their markets. Furthermore, in competitive fields the decision of one competitor to go into manufacturing in a given foreign country often forced others to follow suit. Otherwise the competitor first on the ground would capture the whole market either because of cost advantages or because of protection given to him by the host country through tariffs and other means.

*Outlook for Foreign Investment.* Much of the history and many of the facts of American investment abroad are ignored in current speculation about its future course and in current agitation for its stimulation. For one thing, it should be apparent that there is no correlation between the varying size of the United States economy as measured, for example, by fluctuations in gross national product, on the one hand, and, on the other, the amount of American investment in foreign countries. No systematic relationship exists; hence projections of American investment abroad premised on such a connection are almost meaningless except as an indication of capacity to export capital.

Also fallacious is the notion that a business recession in the United States would produce an increased movement of American capital into foreign investment because investment opportunities at home would be reduced and surplus capital would seek employment abroad. It is improbable, considering the weight of the United States in the world

economy, that a recession here would not be accompanied by a recession in the rest of the world, with a resulting reduction in investment opportunities abroad. It is equally improbable that American investors, which means at present primarily corporate investors, would be retrenching at home and at the same time increasing their investments abroad. The conservative reaction of corporate managements to business recession would apply alike to new investment in the United States and in foreign countries.

There is much that foreign countries could do to make their securities more attractive in the eyes of American investors by way of reducing economic risk and removing fears of adverse action by governments. Even so, the revival on any broad scale of portfolio investment abroad by the United States seems unlikely in the absence of strong inducements from the American side. The general apathy of investors and investment houses to foreign securities shows no sign of lifting. There is therefore great inertia to overcome. On the other hand, the offering of the substantial tax or other inducements to foreign investments which would be necessary to offset the counterattraction of domestic investment is at best problematical. There is the possibility of the opening up of new channels of portfolio investment abroad. The most promising of these would seem to be the specialized investment trust or mutual fund of the type which played so important a role (although under materially different circumstances) in British investment overseas during the nineteenth century and the early part of the twentieth. It is a sobering fact, however, that holdings of foreign securities by existing trusts and funds in the United States are negligible.

Other changes have occurred in the United States since the twenties which militate against the revival of portfolio investment abroad. One is the increasing concentration of investment funds in the hands of institutional investors who are restrained by law or by considerations of risk from investing in foreign securities. Another is the strict regulation of security issues, which, however desirable as a reform measure, acts nevertheless as an impedient to offerings of foreign securities in the American capital market.

The amount and character of American direct investment abroad will presumably not be much different over the next period than its amount and character since the last war. The search for industrial raw materials in foreign countries will continue and entail a considerable annual volume of new investment. If the depletion of domestic resources proceeds according to official projections, this type of investment may be accelerated in the years ahead. So far, however, there is nothing in the historical data which could be construed as a trend. Investment in manufacturing facilities in foreign countries will also continue so long as foreign

markets are fenced off by trade and exchange barriers. There is no indication here, either, of historical trend. It should be emphasized, however, that the plowing back of earnings from a steadily growing aggregate of American direct investment abroad will insure substantial annual additions to the total.

The investment abroad of American capital in the years ahead will undoubtedly make a significant contribution to the development of the resources of foreign countries and the industrialization of their economies. All things considered, however, the prospective amount of such investment cannot be expected to play more than a minor role in the balance of payments of the United States. It would be folly to rely upon it either in theory or in practice, as a substitute for increased purchases by the United States of goods and services from foreign countries as a means of maintaining or raising the level of exports.

# FOREIGN INVESTMENT AND TRADE POLICY IN THE UNITED STATES[1]

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The barriers to foreign investment have been enumerated ad infinitum. In fact, one is tempted to say that the climate for foreign investment is almost the only weather anyone talks about these days. However, it is not my thought to dwell on this matter here. The picture of foreign investment spreading the blessings of capital and technology throughout an eager world has been blown up out of all proportion to reality, but I shall assume the importance and emphasize the potential contribution of such investment. The outlook for further growth of foreign investment is conditioned by what has happened since the war, and I shall try to review these developments. Finally, the existence abroad of a favorable climate for United States investment is a necessary but not a sufficient condition for achieving the benefits of a broader base and wider division of world production. The vital role of U.S. trade policy in determining the efficacy of U.S. investment abroad deserves our attention, and I shall attempt to relate investment and trade in some historical perspective.

In attempting this analysis I am struck by the similarities and contrasts of mid-twentieth-century America and mid-nineteenth-century Britain. Both nations emerged from conflict with greatly increased world power and responsibility, both had experienced a maturing of their internal economies such that manufacturing occupied a position of increasing importance as compared to agriculture, and both had come to rely to a greater extent on foreign sources of raw materials to supply this expanding industry.

Impressed by these similarities, I have tried to examine the circumstances and environment of Britain's renunciation of protectionist policy. I have searched for a discussion of the United Kingdom's position as a great creditor nation with a sense of responsibility for assisting foreigners in earning the sterling with which to purchase British exports. Instead, I find Peel urging a reduction in the cost of bread to his own people. I have sought evidence that the British foreign investor recognized the need for increased imports if foreigners were to be able

[1] I am indebted to Dr. John M. Cassels and Mr. A. O. Munk, of Caltex, for advice and comments in connection with this paper.

to service that investment. Instead, I find the struggle for repeal of the corn laws described as "a bourgeois assault on the citadel of the landed aristocracy"[2] rather than an effort to facilitate the repatriation of capital or to establish the competitive principles of the *Wealth of Nations*.

It may be helpful, therefore, to examine some of the contrasts between America's position today and Britain's more than a century ago. It is obvious that the world environment was substantially different at the time Britain repealed her corn laws. Both she and her customers had had a full thirty years in which to recover from the Napoleonic Wars. The last thirty years have seen the two most destructive wars in history, and scarcely any interval which could be called peaceful. In 1846 no shattering inflation had demoralized currencies and destroyed their interchangeability. No power had walled off half the globe, isolating the imprisoned area from the rest of the world and threatening the safety of investment wherever that power's aggressive tentacles might reach. No similar wave of expropriation, actual or prospective, threatened the investment outlook. No tide of nationalism engulfed in suspicion investment programs of a liberal and humane character. In fact, the principal investment opportunities of that day were to be found in new and sparsely populated countries whose institutions and outlook were essentially British and had, in many cases, been developed by Englishmen.

Thus the fact that an island nation with a sense of urgency in its need for foodstuffs and raw materials responded both by reducing barriers to trade and by diverting a substantial portion of its current income into overseas investment presents a challenging but not entirely parallel precedent for the United States.

Our "corn laws" do not appear so clearly to raise the cost of bread. Their effect on the cost of living is not so dramatic and few employers regard them as exerting an upward pressure on wage rates in the United States. There is even some suspicion that our domestic price support programs do more to force up the cost of living than do any of our barriers to imports.

Marine revenues are likewise a less dramatic factor in our position today. In the 1840's, Britain was already a great trading nation. Its merchant fleet roamed the seas (after Napoleon's defeat) without benefit of subsidy, and trade barriers were an obvious detriment to this important income.

I do not mean to suggest that the deleterious effects of import restrictions upon export markets went entirely unrecognized. There were

[2] C. R. Fay, *Great Britain from Adam Smith to the Present Day* (Longmans, Green, 1950), p. 19.

then as now some who saw in lowered barriers to trade an increased opportunity for foreigners to earn the price of increased exports. But such a view seems to have had little impact on legislation. Neither is there any clear evidence that Britain's "creditor nation" status was a primary motive of corn law repeal. While British foreign investment was substantial in the first half of the nineteenth century, it reached its peak only in 1872, and the growth of foreign investment in the second half of the nineteenth century far outshone that prior to the relaxation of trade barriers.[3] There is doubt that Britain could have financed either its industrial revolution at home or its investment abroad without the profits of its foreign trade.

Let us leave for a moment the question of trade policy and examine the status of American investment abroad. Even without correction for changing value of the currency, U.S. investments abroad advanced only from 3.9 billion dollars in 1919 to 7.9 billions in 1943. They are estimated, however, at nearly 15 billion dollars for the beginning of 1953.

The petroleum industry has been an active participant in this growth in United States overseas investment. From a level of .6 billion dollars in 1919, foreign petroleum investment advanced to 1.4 billions in 1943 and 4.4 billions at the beginning of 1953. In view of general price level changes, I would hesitate to describe this (as one press report did) as a tripling of foreign petroleum investment in the past decade. However, it is significant by almost any yardstick that whereas a decade ago petroleum company investment abroad accounted for only 18 per cent of total foreign investment, the proportion for January 1, 1953, is almost 30 per cent. Again without eliminating the effects of price level changes, total foreign investment has increased in the interval 1943-52 by some 7 billions. Petroleum investment in the same period has increased 3 billions. It would thus appear that some 43 per cent of U.S. private foreign investment has been provided by the oil industry.

At the same time, the petroleum industry has been making substantial investments within the United States. If we add to this program of domestic expenditure by United States petroleum companies the investments they have made over the past decade in Canada, so as to isolate the truly overseas component of American petroleum investment, we must conclude that this component constitutes less than a fifth of the total; so that more than 80 per cent of all investment by this industry has been made in what one of our European friends at the International Chamber of Commerce Congress in Vienna last summer referred to as "those two great underdeveloped countries of the world, Canada and the United States of America."

[3] Sir John Clapham, *An Economic History of Modern Britain,* Free Trade and Steel 1850-1886 (Cambridge, 1952), p. 257.

The problems of payments balances, currency convertibility, and world trade have received of late unprecedented attention. In these discussions the virtues of private foreign investment have been praised so vigorously that one wonders whether this emphasis is based on a real appraisal of the investment climate or is simply a manifestation of the desire to transfer the burden of sustaining an export surplus from the general taxpayer to the foreign investor. I can think of no poorer conduct toward a friendly foreign country than to encourage U.S. investment there without adequate consideration of the problem of servicing such investment. Perhaps some investments are of that fortunate type which has a free and assured dollar market for its production, so that worries over dividends and repatriated capital do not arise. For most, however, only the prospect that the host country can sell more of its production directly or indirectly in the U.S. market provides any hope of making the investment a sound one. It is self-evident that only if foreign producers are able to achieve increased access to American markets can this goal of increased private foreign investment be achieved.

What are the prospects that America's trade policy will be modified in a direction which will permit America's foreign investment to become effective, to realize its potential, and to contribute both to the income of the investor and the economic growth of the host country? The Randall Commission, an association of legislative and public members, is engaged in a vital study of this question. Groups within the business community have memorialized this commission, urging their various points of view. Committees of the Congress are inquiring into various aspects of our international trade relationships. Will this approach succeed in hammering out a foreign trade policy for the United States which will recognize the realities of our foreign investment position, our enormous potential productive capacity, and our ever increasing needs for world markets as our foreign aid programs subside?

Perhaps I may be forgiven if I conclude with another reference to the situation in Britain more than a hundred years ago by mentioning the leadership aspects of this task of maturing the trade views of the community. While Cobden and Bright provided the inspiration of effective prose, it was the statesmen who set the pace. The business community followed rather than led, while agriculture was opposed, and it was Huskisson, as President of the Board of Trade, and Peel, as Prime Minister, who guided Britain into the paths of a liberal trade policy.

## DISCUSSION

Vincent W. Bladen: In the draft of the paper which I received Mr. Maffry referred to the "erroneous notion" that capital movements can "serve an important or lasting function in providing dollar exchange," and he went on to say that there is "no net contribution of dollar exchange to foreign countries." The erroneous notion has become in the final version a "greatly exaggerated" view. But surely credit may serve an important function even though debts have to be repaid; and, if borrowing has been wise, surely there will be a lasting advantage. Is this not true internationally as well as nationally? It is in the period of growth of capital equipment that the dollar exchange is needed; if the venture is successful the strengthened economy will meet the dollar requirement of debt service and still be better off. As a colleague of mine put it: "Human beings are just credits between birth and death; so, on balance, according to Mr. Maffry, we never live."

In the earlier draft, a sharp distinction was made between the motivation of portfolio and direct investment: "Portfolio investment is made on a calculation of return versus risk in comparison with investment opportunities at home." For direct investment the motivation is essentially of a "business" character. Surely the motivation is the same; surely business reasons are essentially concerned with calculations of return and risk and alternative opportunities. It is true that there are complications, since investments are sometimes complementary and it is the addition to the revenue of the integrated enterprise that must be calculated. This is what Mr. Maffry has in mind when in the final version he reminds us that the foreign direct investment must not be treated as an "isolated" unit. But still he contrasts the motivation of the two forms of investment.

Finally, may I add this comment from a citizen of Canada—one of the "host" countries? We need your capital and must learn to take it the way you want to provide it. We need your technology and entrepreneurship, so that we have some reason to welcome that direct investment that brings these with it. But we must protect ourselves against the distortion of our economies which might follow too great direct foreign investment; and we must ask that you, the lenders, recognize your responsibility as well as your opportunity. And, finally, we want to be able to share in the opportunities, so that we ask that you organize your direct investment in forms that permit us, citizens of the host country, to buy shares in the subsidiary (we do not mind if you have majority control). We also want to provide a large and growing part of the management personnel. This, I need hardly add, is in your long-run interests, too, for good will is essential.

H. J. Dernburg: You have heard Mr. Maffry's succinct presentation of the basic trends in the development of United States portfolio investment and direct investment since the twenties, as well as Mr. McIntyre's challenging remarks on the relationship between foreign investment and commercial policy.

There cannot be much controversy as to these very excellent papers. Speaking, of course, on my behalf and not in any other capacity, I would like, if I may, to point up certain changes in the character of both direct and portfolio investment that have taken place against the background of a different investment sky—clouded by the risks of nonconvertibility, expropriation, and a possible future war.

I am in general agreement with the distinctions that Mr. Maffry has drawn between direct and portfolio investment. However, it seems to me that, as compared with the twenties, all these distinctions have become much less clear cut; and that the usual dichotomy as between portfolio investment and direct investment, although useful for statistical purposes, is at present less valid than in the twenties. On the one hand, the present loan financing by the Export-Import Bank and the International Bank, which broadly speaking has taken the place of the earlier portfolio investment, has assumed some of the characteristics of direct investment. This institutional investment involves the exportation of know-how which is of course one of the usual characteristics of direct investment. On the other hand, direct investment, in response to a changed foreign investment climate, is increasingly exporting know-how without assuming control; the renouncing of control is of course one of the traditional earmarks of portfolio investment. Portfolio investment, or its present substitutes in the form of institutional lending, has absorbed therefore some of the functions of direct investment, while direct investment has assumed some of the characteristics of portfolio investment, with the net result that the difference between these two types of financing has narrowed.

There may be considerable doubt as to whether the lending of the Export-Import Bank and the International Bank should be discussed at all in the context of a paper that deals with private foreign investment. The Export-Import Bank is clearly lending governmental funds, while the International Bank is financing its investments primarily through the sale of government-guaranteed debentures. Nevertheless, their lending should be discussed here because the two institutions are substituting to a considerable degree for what used to be clearly private investment. They are financing on a broad scale projects that in the twenties, and under a different investment sky, would have been financed by a number of individual bond issues.

The two institutions do not make available "freely disposable dollar exchange," as in Mr. Maffry's words was characteristic of the bond issues in the twenties, but usually grant specific-project loans. Before authorizing such loans, say, for hydroelectric power development, they would make sure that there is, or is likely to develop, a market for such power; that the projected power development is strategically located; that it is well blueprinted and engineered; that it will be suitably organized and managed; and that it is reasonably promising as a profitable venture. In all phases of the project, the two institutions would provide expert advice and know-how, and they would eventually finance the export of tangible equipment as well as of further know-how. In other words, in mapping out the project in co-operation with the borrower, they would go about it in much the same way as a private public utility corporation would in establishing a foreign subsidiary.

Moreover, the new institutional investment by way of loans does not assume control. This, while obvious, is an important point. At present, capital-importing nations consider such projects as public utility development pretty much a national domain. Consequently, in receiving a loan for hydroelectric power development from one of the two institutions, the capital-importing nation has it both ways: it is able to import capital equipment as well as know-how but without conveying control as would be the case if a private United States public utility corporation were to establish a subsidiary. Therefore, the new type of institutional lending represents a sort of hybrid: it carries along a considerable amount of know-how, which in the past was rather exclusively a function of direct investment; but it does not assume control, which is a major characteristic of the traditional portfolio investment.

Turning now to direct investment, such investment has adjusted itself to a considerable degree to changes in the foreign investment climate and has taken a form that either reduces or completely renounces control. In this way it has moved closer to portfolio investment, which, by the usual definition, is investment without control. In the first place, American business has increasingly shown its willingness to accept a minority interest, in order to comply with restrictive local laws, minimize risks, and gain a larger measure of local acceptance of its own products. A broad sample of a recent Department of Commerce study shows that of the total value of direct investments during 1946 to 1950 more than 25 per cent represented minority participations, as against one-half of one per cent in the course of the preceding years. (See *Direct Private Foreign Investment of the United States*, Census of 1950, Department of Commerce, 1953.)

In the second place, and even more significantly, there seems to be a trend on the part of private United States corporations towards "exporting" know-how without the export of tangible assets and without controlling the foreign corporations to which such know-how is being made available. By exporting know-how without exporting tangible assets, the major foreign investment risks—namely, those of nonconvertibility, expropriation, and war destruction—are reduced; by not assuming control, national sensitivities are taken into account. In this way American business has shown its ability and willingness to adjust itself to a changed foreign investment climate.

Traditionally, attention in the United States has focused on the outflow of tangible capital, which can be readily added up, while the outflow of intangibles from private United States corporations has to date received scant consideration. I would like, therefore, to give you a brief, if incomplete, survey of the various forms in which the export of corporate know-how or of intangibles has taken place in recent years.

One important way of making know-how available to foreign nations without acquiring corporate control has been the conclusion of licensing agreements under which private United States corporations make available to private foreign corporations various designs, patents, processes, and other technical information. Licensing agreements, which typically run for periods of five or ten years, are particularly frequent for chemical and pharmaceutical products, electrical equipment, and many lines of machinery. Under these agree-

ments, the American licensor receives royalties which usually represent a percentage of gross sales.[1] While these agreements are not a new development, they are currently being concluded on a large scale. For example, in the period August, 1950, to December, 1952, Japanese corporations concluded some 220 licensing agreements with private foreign corporations, including some 160 agreements with United States corporations.

I would like, moreover, to draw your attention to the multitudinous contracts that have been concluded between United States engineering-consultant and construction firms on the one hand and foreign private corporations or foreign governments on the other. The services rendered by the United States corporations are of varied nature and scope, ranging from the blueprinting of the outlay of an individual foreign public utility project to that of a nationwide public utility development plan, or the mapping out of an over-all economic development plan for a whole nation, covering all aspects of its economic life. Over and above compensation for costs, the consulting firms receive a one-time fee, the magnitude of which depends upon the size and complexity of the project. While engineering advice is by no means a new development, it has greatly gained in importance as a result of the increased development efforts of foreign nations.

Less frequent but rather promising as a means of participating in the development of foreign nationalized mineral resources are exploration and exploitation agreements between private United States corporations and foreign governmental corporations. For example, the Mexican government has nationalized petroleum, and a governmental corporation, the Pemex (Petroleos Mexicanos) is in complete control of the country's petroleum resources. However, United States petroleum corporations have entered into agreements with Pemex that authorize them to drill for petroleum in specified areas. If petroleum is struck, the sales proceeds from the petroleum are first used to compensate the United States corporations for the cost of surveying and of drilling equipment and for other expenses. Further proceeds are divided at specified ratios between Pemex and the United States corporations. The share of the United States corporation is smaller if the drilling takes place on proven ground and larger if the ground is unproven. Such contracts, if petroleum is struck, are not limited in time, and sizable profits have been reaped by United States corporations under such agreements.

A very promising device is the use of management contracts, some of which have been integrated with licensing arrangements. Examples of "pure" management contracts are those concluded by American hotel corporations with foreign domestically-owned hotels, especially in Latin America and the Mediterranean area. Most of these hotels have recently been built or are now in the process of construction. Their blueprints, provided by the American hotel corporation, are drafted so as to attract American tourists and businessmen. The American corporation provides only the funds for the initial opera-

[1] This percentage is reported to be comparatively low in such mass-production industries as textiles, rubber, electrical appliances, and steel; and to be relatively high in such fields as precision measuring instruments, certain chemicals, and antibiotics—all of these having cost much to develop.

tions, say, during the first half year, while the large outlays for fixed capital are financed by local capital, both private and public, which in some cases are refinanced by the Export-Import Bank. The American corporation, of course, also provides management and employs chiefly American-trained local personnel. To the extent that these hotels are operated under a management contract, as most of them are, the contract provides for a fixed fee plus a percentage of the profits that varies from case to case.

Another, and final, variation on the theme of exporting intagibles is represented by the so-called "franchise agreements" characteristic of United States corporations producing soft drinks. These corporations help local capital in foreign countries to establish so-called "bottling plants" by providing them with the blueprints and technical assistance necessary for their construction. The franchise agreement conveys to these foreign corporations a monopoly for the production and distribution of the product in specified areas, requires them to meet certain standards of performance, and provides that they purchase certain concentrates essential to the finished product from the United States corporations. The price for the concentrates includes the costs of, and the royalties due to, the United States corporation.

All these agreements appear to be in the interest of the foreign host countries and to be consistent with their national aspirations. They provide these nations almost overnight with know-how that has cost American corporations decades and millions of dollars to develop. All of them, moreover, leave production and control in the hands of local capital. Another important advantage is that the licensing and franchise agreements lower the foreign exchange burden on the foreign country. If the goods produced under such agreements were produced by an American-controlled subsidiary, the foreign exchange burden would obviously be larger because the investment would have to be amortized and because, by definition, profits would exceed royalty payments. The exchange burden would be still larger if the goods now domestically produced under a licensing agreement were to be imported. In the case of the petroleum and hotel agreements, the host country achieves an increase in its dollar receipts. Consequently, these agreements either result in a substantial saving in dollar exchange or lead to an addition in dollar earnings.

At the same time, these agreements are in the interest of the United States corporations exporting the know-how. Since, generally speaking, no tangible capital is exported, there is no problem of amortization or of "bringing home" the capital. All the usual foreign investment risks of nonconvertibility, nationalization, and war destruction are minimized. The returns, to be sure, are smaller than if a foreign subsidiary were established. But, with a minimum of risk, there is as a result of most of these agreements a steady flow of income from abroad to the American corporation as long as conditions permit.

The outflow of intangibles to foreign nations is of course not reflected in our statistics on the amount of direct foreign investment outstanding, but if the value of the intangibles were to be capitalized on the basis of the incomes derived from them, the sums would presumably be very sizable. Nor is the outflow of intangibles reflected in the United States balance of payments; only the influx of royalties, profit participations, or fees is recorded.

In conclusion, both American portfolio investment and direct investment have undergone distinct changes in character, and the difference between the two types of investment has narrowed. Most important, direct investment has gone a long way in adjusting itself to a changed foreign investment climate. The aspirations of foreign nations are better taken into account; exchange burdens are lessened, or additional dollars are earned. From the point of view of the American corporation, foreign investment risks are minimized.

None of our governmental policies, such as the conclusion of investment treaties or the issue of guaranties covering the risks of nonconvertibility and expropriation, have proved so far very successful in promoting private foreign investment. Nor is it by all means sure, that, as Mr. McIntyre implied, the United States will be able to liberalize its commercial policy so as to make a substantial contribution to relieving exchange shortages of foreign nations and thereby improving the foreign investment climate. Whatever policies our government may follow in the future, American business itself can make an important contribution to increasing the outflow of capital by further developing ways of acclimatizing itself to changed conditions.

# ECONOMIC IMPLICATIONS OF AN AGING POPULATION

## Review of the University of California Research Project

## THE LABOR FORCE STATUS OF PERSONS AGED SIXTY-FIVE AND OVER

*By* Robert Dorfman
*University of California*

My task is to discuss the employment status and employability of the older members of the American population. Before I begin that task I should like to place this paper in context. I hardly have to remind you that for some years the realization has been growing that the older members of the population, say those 65 years old and older, face and present special problems which require serious attention. In order to assess those problems, the Institute of Industrial Relations of the University of California undertook quite a large study under the sponsorship of the Rockefeller Foundation.

For practical and conceptual purposes we broke down the problems which we studied into a number of categories: social, psychological, political, and economic. A separate research team was organized within each of these categories to study the problems of the older persons from the point of view of that discipline, using appropriate techniques. Mr. Reder, Mr. Steiner, and I constitute the team which is studying the economic aspects of the problem.

The basis of our study is a survey carried out for us by the Bureau of the Census in connection with the Current Population Survey for April, 1952. At that time the census interviewers conducted special call-back interviews at about 3,000 households which included one or more persons aged 65 or over. We believe that these households are representative of the entire population of such households in the country. The interviews dealt with the current economic situation of the older persons, their living arrangements, and certain information about their work histories. Our three reports present some of the results of that survey.

I am going to deal with only one phase of the survey—the phase relating to employment status and employability. It is, in my opinion, an especially important and revealing phase because the whole wide-

spread research project which I have sketched tends to emphasize the crucial importance of employment status in the life of the individual. Older persons have insufficient incomes—in part because they do not have jobs. They are isolated, frustrated, and maladjusted—in part because they do not have jobs. They contain the seeds of a restive and irresponsible political group—in part because they do not have jobs. In short, ours is a job-oriented society, and it is not surprising that the whole complex of problems which accompanies aging should be related to the question of job or no job. Nor, therefore, is it surprising that an increase in the job opportunities offered to older persons should be one of the most frequently suggested solutions to most of these problems.

The results of the survey which I am about to present add up to two conclusions, both grim and neither surprising. First, it is certainly true that older members of the population have to a substantial extent become separated from their jobs and from all that their jobs mean in terms of income, social standing, and psychological satisfaction. In April, 1952, 85 per cent of all males over 14 were in the labor force or in the armed forces. For males of 65 and over, the proportion was down to about 41 per cent. Furthermore, no less than 80 per cent of the older males who are not in the labor force were compelled to leave their last jobs either by their employers or by their states of health. In brief, slightly under one-half of all men over 65 have been separated from their employments by reason of health or conventional superannuation.

The second conclusion is that programs for re-employing older people, although they certainly may work constructively in many individual instances, cannot be expected to do much toward relieving the whole range of problems faced by the aged. Partly this is because 40 per cent of the men over 64 are already employed so that, insofar as employment is a cure for their problems, they are taken care of already. To a larger extent this is because 77 per cent of the older men who are not in the labor force feel that they are not well enough to work. A re-employment program could hardly meet the needs of these men or their families. Finally, this is because the older members of the population have not only grown old; they have obsolesced. This is revealed in our survey in two ways. First, the occupational distribution of the older men is strikingly different from that of the entire male population. For example, 31 per cent of the older men have farming as their longest or predominant occupation; the comparative figure for the entire male population over 13 years old is 13 per cent. A second indication of deterioration or obsolescence of skills is contained in the comparison of the normal (as indicated by longest) occupation of older men with their last or current occupation. We found that although 39 per

cent of the older men interviewed gave professional, technical, and skilled trades as their longest occupation, only 33 per cent gave such work as their final occupation. At the same time that the survey revealed that aging was associated with a drift away from skilled occupations, it revealed a drift toward unskilled labor. Thirty per cent of our sample give service, farm, and miscellaneous kinds of labor as their longest occupation; 38 per cent gave these occupations as their terminal employment. There is a noticeable tendency, then, for the older man to be demoted even before he stops working. His skills become less effective and less valuable.

Before I conclude this impressionistic sketch of our findings, I must point out one mild bright spot in this otherwise gloomy picture. Between a half and two-thirds of sampled men remained in their normal occupations until the end of their careers. The predominant tendency of those who move, as we have just seen, is to move down the occupational scale. But some upward movement was also recorded in our sample. There was a slight tendency to move from other occupations, particularly professional and technical, into the managerial classification.

This summary has been devoted exclusively to employment position of older men. As a matter of fact, most persons over 65 are women. The employment status of a woman, however, does not have the same significance as that of a man for either economic or social position. This is particularly true of older women. In our sample of older women, only 8 per cent were in the labor force and only 41 per cent had worked since reaching the age of 50. As a standard of comparison, at the time of our survey about one-third of all adult women were in the labor force. It appears that the family adjusts primarily to the man's employment status, if there is a man, and if no man is present, still it is not loss of employment primarily which marks the passage into old age. The change in employment status associated with aging is a problem chiefly as it affects men.

We have now surveyed the general picture and it is not one, I think, which Walter B. Pitkin would find agreeable. As the years advance, the man is more likely to find himself demoted than promoted and, finally, by the middle of the seventh decade he is likely to find himself separated entirely from employment either by reason of health, general loss of vitality, or some conventional retirement policy. The scope for programs of deferred retirement or for re-employment is appreciable. The survey revealed that 5 per cent of the men over 65 are not in the labor force but consider themselves well enough to work and would be interested in full- or part-time work. Five per cent of the 5.8 million men of 65 and over is not a contemptible number. But neither is it a solution to the complex of problems resulting from loss of employment status

which the economic survey and the other phases of the research project have revealed.

The general picture gains in richness and intelligibility when we look at the details, some of which are shown in the accompanying tables. Table 1 supports two of the generalizations which I have made. This table shows the percentage distribution of the older men in our sample into eleven occupation groups. In the first column the men are distributed according to their longest, and presumably their normal, occupation; in the second column they are distributed according to their final occupation. The third column shows, for comparison, the occupational distribution of the male labor force.

TABLE 1

PERCENTAGE OCCUPATIONAL DISTRIBUTION OF MALES SIXTY-FIVE AND OVER WHO HAVE EVER WORKED AND OF EMPLOYED MALES, FOURTEEN YEARS OLD AND OLDER, 1951

| Occupational Group | Men 65 and Over | | Men 14 and Over |
|---|---|---|---|
| | By Longest Occupation | By Present or Last Occupation | By Present Occupation |
| Professional and technical | 6 | 5 | 7 |
| Farmers and farm managers | 27 | 21 | 9 |
| Nonfarm managers and proprietors | 8 | 10 | 12 |
| Clerical | 4 | 5 | 6 |
| Sales | 5 | 4 | 6 |
| Craftsmen, foremen, etc. | 20 | 17 | 19 |
| Operatives | 13 | 12 | 21 |
| Household service | 1 | 0 | 0 |
| Other services | 5 | 11 | 6 |
| Farm labor and foremen | 4 | 4 | 4 |
| Labor except farm and mine | 7 | 11 | 9 |
| Total | 100 | 100 | 99 |

SOURCES: Columns 1 and 2: Follow-up survey of persons 65 years old and older. Column 3: Bureau of the Census, *Annual Report of the Labor Force 1951* (Current Population Reports, Series P-50, No. 40, May 19, 1952), page 4, Table D.

Comparison of the first column with the last shows a relatively heavy concentration of the older men in rural occupations and a relative deficiency in the operative or intermediate skilled category. The relative fewness of older men with predominant experience in managerial and clerical occupations is less striking but also appears to be significant statistically. (The tests of statistical significance used in preparing this report were approximate and are subject to revision.) These two columns show that the older men, in a sense, know the wrong trades. In all likelihood it understates the extent to which the skills of older men are out of tune with contemporary needs. It seems safe to assume that, just as the table reveals that the broad pattern of backgrounds of older

men differs markedly from that of the contemporary work force, so within single groups—for example, craftsmen—more refined data would show that many of the older craftsmen have skills for which demand has declined over the years.

Below we shall consider the labor force availability of the older men. But before leaving Table 1, it is revealing to compare columns 1 and 2 which display the drift away from professional and skilled occupations toward the service and labor fields. The two occupational classes which gained substantial recruits as these men reached the end of their working lives were service other than household and unskilled labor. *In toto,* about 14 per cent of the men in our sample who spent most of their working lives in more highly paid occupations ended up in these two groups. Looking at the other side of the coin, about 12 per cent of the men who were not in the professional, technical, managerial, or skilled occupations during the bulk of their working careers graduated into these classes before the end. This upward movement does not appear in the table because the movement out of the more highly paid occupations more than outweighs it, and the net movement, shown in the table, is definitely downward.

TABLE 2
LABOR FORCE AVAILABILITY, MALES OVER SIXTY-FOUR, BY LONGEST OCCUPATION GROUP*

| Longest Occupation Group | Per Cent in Labor Force | Per cent Not in Labor Force | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Total | Well Enough to Work | | | Not Well Enough to Work | Availability Not Ascertained |
| | | | Interested | Not Interested | Total | | |
| Professional and technical | 67 | 33 | 5 | 12 | 17 | 15 | 2 |
| Farmers and farm managers | 43 | 57 | 2 | 8 | 10 | 46 | 1 |
| Nonfarm managers and proprietors | 53 | 47 | 5 | 12 | 17 | 29 | 2 |
| Clerical | 31 | 69 | 6 | 19 | 25 | 45 | 0 |
| Sales | 49 | 51 | 5 | 12 | 17 | 33 | 0 |
| Craftsmen, foremen, etc. | 33 | 67 | 5 | 7 | 12 | 53 | 2 |
| Operatives | 36 | 64 | 3 | 6 | 8 | 55 | 1 |
| Other services | 35 | 65 | 7 | 1 | 8 | 56 | 0 |
| Farm labor | 35 | 65 | 6 | 8 | 14 | 48 | 3 |
| Labor except farm and mine | 31 | 69 | 3 | 7 | 10 | 59 | 0 |
| Not available | 47 | 53 | 0 | 0 | 0 | 18 | 34 |
| All groups | 41 | 59 | 4 | 8 | 12 | 45 | 2 |

* Rows do not add because of rounding errors.
SOURCE: Follow-up survey.

In assessing these comparisons it should be borne in mind that a change in status is reflected in our data only if it is substantial enough to involve crossing the boundaries of broad occupational groups. Our

data hide the movements both upwards and downwards within occupational classes, and it would be sheer guesswork to suggest which direction predominates in the hidden movements. What the data do show unambiguously is that men tend to be demoted to less skilled and less rewarding occupations before the end of their working careers, the signal exception being managerial occupations and proprietorship.

Table 2 throws a different kind of light on the predicament of men in the retirement ages. The first column shows the proportion still in the labor force for men of 65 and over who spent the bulk of their careers in each of the eleven major occupation groups. This proportion varies from two-thirds to about one-third, declining quite steadily as we move down the scale of economic and social status. The remaining columns of the table give some indication as to why the older people of various backgrounds are not in the labor force. The proportion of those well enough to work who are interested in working does not show any consistent pattern as we look down the list of occupation groups. It is about a third for the professional and technical group and a third also for the unskilled laborers. But the proportion which those not well enough to work bears to the total out of the labor force shows a very striking relation to occupational background. Over all, about three-quarters of the men out of the labor force said they were not well enough to work. Group by group, this proportion was under one-half for only the professional and technical workers; it was 80 per cent or more for the farmers, craftsmen, operatives, laborers, and service workers. The distinction between the groups with small and large rates of not-well-enough to work is not perfectly clear but seems to correspond generally to the distinction between workers of hand and workers of brain. Since this cause accounts for the great bulk of the men not in the labor force, we have here encountered a physiological fact which excludes older men from the occupations to which they are trained. In interpreting this table it should be borne in mind that it is the respondents themselves who classified themselves as "not well enough to work." They may, of course, be in error, and I do not know whether psychological bias would work in the direction of overstating or of understating this proportion. The correspondence of the results to the nature of the physical demands which the respondents encountered in their normal occupations seems to lend credibility to the responses, however.

Table 3 presents a different type of data bearing on the question of employability. This table is based on the reasons given by older men not in the labor force for leaving their last job. Note that about three times as many left their last jobs voluntarily (i.e., on their own initiative rather than that of their employers) as involuntarily. Somewhat more than half of those who retired at all did so for reasons of health.

About three-quarters of all those who retired voluntarily did so because of poor health. Retirement for reasons of health is noticeably more prevalent in manual than in nonmanual occupations. Comparison of Tables 2 and 3 shows, as you would expect, that in every category the proportion of older men who report themselves as not well enough to work is greater than the proportion who retired because of ill-health.

Nearly all those who retired voluntarily did so because of poor health in all occupation groups except professional and technical, managerial, and clerical. Even in managerial and clerical occupations, about 60 per

TABLE 3

REASONS FOR RETIREMENT FOR MALES OVER SIXTY-FOUR, BY LONGEST OCCUPATION GROUP

| Longest Occupation Group | Per Cent | | | Health Reasons as Per Cent of Total Retired | Formal Retirement Systems as Per Cent of Total Retired |
|---|---|---|---|---|---|
| | In Labor Force | Voluntary Retirement | Involuntary Retirement | | |
| Professional and technical | 67 | 21 | 13 | 21 | 12 |
| Farmers and farm managers | 43 | 50 | 7 | 65 | 3 |
| Managers and proprietors | 53 | 38 | 10 | 47 | 8 |
| Clerical | 31 | 43 | 26 | 38 | 29 |
| Sales | 49 | 35 | 16 | 55 | 21 |
| Craftsmen, foremen, etc. | 33 | 45 | 22 | 53 | 24 |
| Operatives | 36 | 50 | 14 | 65 | 12 |
| Service, except household | 35 | 46 | 18 | 56 | 19 |
| Farm labor | 35 | 60 | 5 | 69 | 2 |
| Labor, except farm and mine | 31 | 52 | 17 | 57 | 12 |
| Total | 41 | 46 | 14 | 57 | 13 |

SOURCE: Follow-up survey.

cent gave health as the reason for retirement. Leaving aside, then, the professional and technical workers, who constitute only 6 per cent of the total, poor health is far and away the most important reason for leaving the labor force and, to even a greater extent, for remaining out.

Formal retirement systems are a poor second to health as a reason for leaving the labor force. Compulsory retirement caused less than one-quarter as many separations from the labor force as health did. The chief impact of compulsory retirement rules was on clerical workers, where the impact of poor health was comparatively light. A fifth of the clerical workers in our sample were retired under compulsory retirement rules. About a sixth of the craftsmen retired under such rules. The proportions were noticeably smaller for all the other groups. Over all, we found that 8 per cent of the older men in our sample had been compelled to retire because of a formal retirement system and that

these systems accounted for 13 per cent of all retirements. Of the men who had been subjected to formal retirement, about one-eighth had returned to the labor force and more than half considered themselves not well enough to work.

To be sure, the impact of formal retirement systems is likely to grow in the future and our data reflect only in small degree the effects of the industrial pension movement which has been under way for the past ten years. As far as present problems and the near future are concerned, however, these figures indicate that changes in retirement rules would

TABLE 4

DISTRIBUTION OF MEN SIXTY-FIVE AND OVER BY INCOME OF EXPENDITURE UNIT AND RELATION OF INCOME TO LABOR FORCE AVAILABILITY, APRIL, 1952

| Income of Expenditure Unit | Per Cent Men 65 and Over | Per Cent of Men 65 and Over in Given Income Class Who Are: | | | | |
|---|---|---|---|---|---|---|
| | | In Labor Force | Not in Labor Force | | | |
| | | | Total | Not Well Enough to Work | Well and Interested | Well and Not Interested |
| None | 10 | 8 | 92 | 74 | 4 | 9 |
| $ 1–$ 499 | 16 | 30 | 70 | 58 | 2 | 7 |
| 500– 999 | 23 | 19 | 81 | 63 | 4 | 9 |
| 1,000– 1,499 | 14 | 30 | 70 | 55 | 4 | 9 |
| 1,500– 1,999 | 9 | 44 | 56 | 37 | 7 | 10 |
| 2,000– 2,499 | 7 | 63 | 37 | 26 | 4 | 6 |
| 2,500– 2,999 | 4 | 69 | 31 | 16 | 3 | 10 |
| 3,000– 3,499 | 5 | 77 | 23 | 15 | 4 | 4 |
| 3,500– 3,999 | 3 | 89 | 11 | 9 | 0 | 0 |
| 4,000– 4,999 | 4 | 77 | 23 | 15 | 0 | 8 |
| 5,000– 5,999 | 2 | | | | | |
| 6,000– 6,999 | 1 | | | | | |
| 7,000– 9,999 | 1 | 82 | 18 | 8 | 0 | 6 |
| 10,000–14,999 | 1 | | | | | |
| 15,000–and over | 1 | | | | | |
| All | 100 | 40 | 60 | 47 | 4 | 8 |

SOURCE: Follow-up survey.

affect the lives of only a minority of older persons. The great controlling factor seems to be the decline in health.

Other causes of retirement, insofar as we ascertained them, were far less important than these two.

I am sorry to sound as though state of health were a monomania of mine. It just happens that practically every kind of data we obtained emphasizes the importance of this one factor. Table 4, which we turn to now, tells the same story. This table shows the relationship between

labor force availability on the one hand and the income of the expenditure unit to which an older man belongs (either the man himself or he and his wife) on the other. The first striking feature of this table is contained in the column which gives the percentage of men in each income bracket who are in the labor force: this percentage climbs sharply from 8 per cent for units with no income to 82 per cent for units with incomes of $5,000 and over.

This climb in the rate of labor force participation does not, of course, reveal causality. But the subsequent columns do reveal the forces here at work. Notice that 74 per cent of the men in units without income were not well enough to work while only 8 per cent of the men in units with incomes of at least $5,000 were not well enough. Between these two limits there is a steady fall in the proportion not well enough to work. Furthermore, the percentage of men well enough to work but not in the labor force (the sum of the last two columns) does not vary significantly from income bracket to income bracket nor, for that matter, does the proportion of those interested in working but not working to the total number well enough to work. It is not differences in desire to work, then, which account for differences in labor force participation, but differences in the state of health. And, therefore, except insofar as income affects health, it is not income which determines the rate of labor force participation but rather the other way round: the level of income of the expenditure unit depends predominantly on whether the man is working.

We have made a further analysis of the relationships displayed in this table, dividing the men aged 65 and over into two classes, depending on whether they were living with their wives or not. On the whole, this analysis indicated that men living with their wives had higher rates of labor force participation than men living alone, especially in the lower income brackets. Let us not be too hasty, though, in attributing this to the salutary effects of married life. "Men 65 and over" covers a wide range of ages, during which ability to work deteriorates noticeably. The men living with wives tend to be younger than the others and it seems a reasonable hunch that this accounts for their higher rate of labor force participation.

An instructive sidelight on the whole problem of our aging population is thrown by Table 5, which indicates that to a considerable extent we are confronted with the problem of an urbanizing population. In this table we have classified the older men according to the type of community in which they dwell. The table shows that only 19 per cent of the older men live on farms although, as we noted earlier, 31 per cent of them give farm work of some sort as their predominant occupation. The proportion of older men who are unable to work is approximately the same for all types of community but, in the present table, that proportion

TABLE 5

COMMUNITY TYPE AND LABOR FORCE STATUS, MEN OVER SIXTY-FOUR, APRIL, 1952

| Community Type | Per Cent of Older Men | Per Cent of Older Men in Given Community Type Who Are | | |
|---|---|---|---|---|
| | | In Labor Force | Not in Labor Force | Unable to Work* |
| Urban | 59 | 40 | 60 | 15 |
| Rural nonfarm | 22 | 33 | 67 | 13 |
| Rural farm | 19 | 57 | 43 | 16 |
| All | 100 | 42 | 58 | 15 |

* This concept is more restrictive than "not well enough to work," used in Tables 2 and 4. A respondent is "unable to work" if he suffers from a specific major disability. He is "not well enough to work" if he says so when asked. The two concepts show the same general relationship to income, although the absolute figures differ considerably.

SOURCE: *Current Population Survey*, April, 1952.

ceases to be the controlling factor. Labor force participation is much higher in farm committees than in either of the other two types in spite of the fact that the state of health tends to be no more favorable there. Two factors probably are here at work: first, the fact that older men can be incorporated more readily into the working life of a farm community than into that of a town or city; second, a substantial tendency for older people to migrate away from the farms when they withdraw, or are rejected, from the labor force. The fact that the proportion of older men living on farms is smaller than the proportion who give farm work as their normal occupation is evidence of the tendency to leave the farm. Perhaps this explains the very low rate of labor force participation in rural nonfarm communities. I doubt, however, that migration is the entire explanation of the high rate of labor force participation in rural farm communities.

The problem of the older woman is very different from that of the older man. Jobs and occupations play a much less significant role in

TABLE 6

LABOR FORCE AVAILABILITY, FEMALES SIXTY-FIVE AND OVER, APRIL, 1952

| Class | Per Cent of Total |
|---|---|
| In labor force | 9 |
| Not in labor force | 91 |
| No work since age 50 | 59 |
| Work since age 50 and | |
| Not well enough to work | 22 |
| Well enough, not interested | 5 |
| Well enough, interested | 1 |
| Status not ascertained | 4 |

SOURCE: Follow-up survey.

the life of a woman in our society than they do in that of a man, and this fact is reflected in the labor force status of older women. The salient data are summarized in Table 6. Sixty per cent of the women in our sample had not worked since they were 50 years of age; i.e., since 1938 at the latest. Of those with more recent work experience, more than a third considered themselves not well enough to work and only a twentieth expressed interest in either full- or part-time employment. The dominant feature, of course, is that these women are not trained to gainful employment and questions of employability are largely irrelevant to their problems. This statement is nearly as true of widows and

TABLE 7
SUMMARY ESTIMATES OF LABOR FORCE STATUS, APRIL, 1952
(Thousands)

| | MALES | FEMALES | TOTAL |
|---|---|---|---|
| Persons 65 and over | 5,760 | 6,520 | 12,280 |
| In labor force | 2,410 | 530 | 2,940 |
| Not in labor force | 3,350 | 5,990 | 9,340 |
| Well enough to work | 770 | | |
| Not well enough to work | 2,580 | | |
| Well and interested in full- or part-time work | 200 | 78 | 278 |

SOURCE: Population base from *Current Population Report*, page 20, No. 44. Percentage distributions from *Current Population Survey* for April, 1952, and from follow-up survey.

spinsters as it is of married women; less than half of the women without husbands had worked since age 50. Thus the women over 65 represent, as you would expect, only a negligible source of potential workpower and the possibility of employment has only a scant bearing on the problems they face.

All these percentages may be more vivid if blown up into national aggregates, and we have done this with a few of the more basic ones in Table 7. This table presents estimates of the total population 65 and over, the numbers in the labor force, and the numbers who are well enough to work and who desire at least part-time work. The indications are that of better than 3 million males over 65 and out of the labor force only about 200 thousand want jobs and feel able to handle them. The great majority of the older men out of work, some 2.6 million, feel that they are not well enough to work.

Here then is the core of the economic problem of the aged, and it looks like a hard core. The various devices which have been suggested for persuading employers to retain older employees do not, in the light of these figures, touch the heart of the problem. The problem is not one of a great reservoir of wasted resources but of men whose working lives are in a very real sense over. Their social lives are not over, however, and must be provided for. Mr. Steiner, in the next paper, will discuss the magnitude of this problem.

# THE SIZE, NATURE, AND ADEQUACY OF THE RESOURCES OF THE AGED[1]

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The economist concerned with gerontology is clearly a dismal scientist. Dr. Dorfman has suggested one dismal conclusion: a significant increase in the labor force participation of the aged is not to be expected. I suggest another: the resources of the aged are, to a shocking degree, inadequate. The importance of the former conclusion for the latter should be apparent: the problem of inadequate resources is not going to be solved by an increasing utilization of what are usually called "the skills of older workers," although this approach has received a great deal of attention.

There are many aspects of the question of the resources of the aged, not all of which will be covered. I shall try to consider resources insofar as they bear on the level of living of the aged groups. Among the questions I shall try to answer are: How large are the receipts of the aged and how nearly adequate are they? To what extent are those without adequate receipts living submarginally? To what extent are the aged self-supporting, to what extent dependent upon their families, and to what extent dependent upon public support? I shall not discuss the holdings of savings and assets by the aged, except as either of these resources is being used to provide for current expenditures. Similarly I shall not be concerned with the ability of aged persons to withstand economic shocks such as illness, death of a spouse, etc. These are important matters, but will be left to another time.

## I. *Some Preliminary Definitions*

In order that what follows shall not be misunderstood, let me define certain concepts.

By receipts, I mean the total amount in dollars of all moneys received from all sources by aged economic units. This concept is clearly broader than the usual concept of income. Income as defined by the Bureau of the Census includes earnings, interest, dividends, rents, pensions, regular contributions from persons, and payments of public assistance and relief. We include, in addition, dissaving and occasional cash gifts but

[1] The research herein described is part of a larger study on the *Economic Implications of an Aging Population* undertaken through the Institute of Industrial Relations, University of California, Berkeley, under a grant from the Rockefeller Foundation.

only insofar as they are used to meet living expenses. A better designation, perhaps, would be "total receipts or expenditures, whichever is greater," but for simplicity, the shorter designation, "total receipts," is used.

The unit of analysis is an aged economic unit rather than an aged individual. The essence of this distinction is the treatment of married couples as a single economic unit rather than as two separate individuals. This seems clearly appropriate; it is certainly the joint receipts of the couple that are relevant in determining their ability to meet the economic problems of old age. We define three types of economic unit:

TABLE 1
AGED ECONOMIC UNITS: MARITAL-SEX STATUS*

| CATEGORY | NUMBER | PER CENT | MEDIAN INCOME |
|---|---|---|---|
| Aged couples | 3,763 | 38.4 | $1,387 |
| Single men (unrelated males) | 1,810 | 18.5 | 662 |
| Single women (unrelated females) | 4,230 | 43.1 | 273 (403)† |
| Total | 9,803 | 100.0 | |

* The data presented in these tables were obtained in April, 1952, through personal interview with persons 65 and over in a sample of about 15,000 households in 68 sample areas located in 42 states and the District of Columbia. Because of sampling variability the figures shown may differ from those that would have been obtained from a complete enumeration of all persons 65 and over. A sampling statement will be mailed upon request.

† Where median less than $500 the lower figure utilizes information concerning zero receipts; the higher figure in parentheses combines all those with incomes below $500 into a single class. Census medians utilize the latter procedure.

first, couples, the male member of which is 65 or over; second, unrelated males (that is, males with no spouse or with spouse absent); and, third, unrelated females. A distinction of this kind is both significant and revealing, as is seen in the accompanying Table 1, which focuses particularly upon both the size of the group of single women and their relatively inferior economic position. (About the latter, we shall have more to say at a later point.)

The yardsticks chosen for the appraisal of the adequacy of receipts do not imply any ethical or moral judgment of what is an adequate level of living or, indeed, of the level to which one should aspire. The raw materials used in constructing these yardsticks are the budget studies for elderly couples developed by the Social Security Administration and the Bureau of Labor Statistics, adjusted to correspond to 1951 prices and to allow for the effect on living costs of the size and type of community and of the size of family unit in which particular units reside. The basic budgets are budgets at "maintenance" level, which may be defined by the following two quotations:

The level of living represented by the budget may be described as one providing the goods and services necessary for a healthful, self-respecting mode of living, allowing normal participation in the life of the community, in accordance with current American standards. Social and conventional as well as physiological needs, are taken into account. In other words, the budget is intended to provide a modest, but adequate, living standard. (*A Budget for an Elderly Couple,* Federal Security Agency, Bureau Memorandum No. 67.)

The maintenance level is a level . . . that supplies for aged persons all those bare necessities of simple living customary among persons used to low incomes. There are few comforts, except such as energy, resourcefulness, and good management make pleasant and comfortable living possible out of bare necessities. The budget does not allow for saving. . . . It does not provide for emergencies of any kind or for major illness. . . . The budgets represent not an optimum level, but rather one below which aged persons could hardly be said to have a minimum of security. (Florence A. Armstrong, *Cost of Living for Aged Persons,* Federal Security Agency, Social Security Board Bureau Memorandum, No. 53, October 1943.)

These quotations certainly suggest that even maintenance budgets are hardly ideal budgets; they are not upper limits to what might be desirable in terms of an American standard of living. Nevertheless, they may be too high to be yardsticks for measuring the adequacy of receipts of aged persons. In the first place such budgets do not reflect the highly significant fact that a significant portion of the living expenses of many aged units is, in effect, prepaid or noncash in form. For example, almost half of the economic units own houses or farms, free and clear, and thus receive housing at figures below those estimated in these maintenance budgets. Similarly, for farm families there is an appreciable amount of consumption of home produced food; a small cash level of receipts is thus less inadequate than might first appear. In the second place, total maintenance budgets in representing a "modest but adequate standard of living" fail to indicate a critical or emergency level of income. To meet the first of these objections, we shall deal with so-called "cash equivalent" budgets at the maintenance level; that is, budgets adjusted to estimate the average cash outlays typically required to provide the goods and services included in the total maintenance budget. To meet the second objection and to try to arrive at a truly critical minimum budget level, we use a special emergency budget, which is 70 per cent of the cash equivalent budget, thus following a suggestion made by the WPA that 70 per cent would clearly be an emergency level. The lowest of these budget sets seems truly minimal, and it is used to give a minimum estimate of the number of persons whose economic situation is critical. To repeat, we do not suggest that this budget level—or, indeed, any of these budget levels—reflects the aspirations of the American people toward the aged.

## II. *Size and Adequacy of Receipts*

The receipts distribution of each type of aged unit for the year 1951 is presented graphically in the accompanying Figure 1.

The median receipts were less than $1,500 for couples, were less than

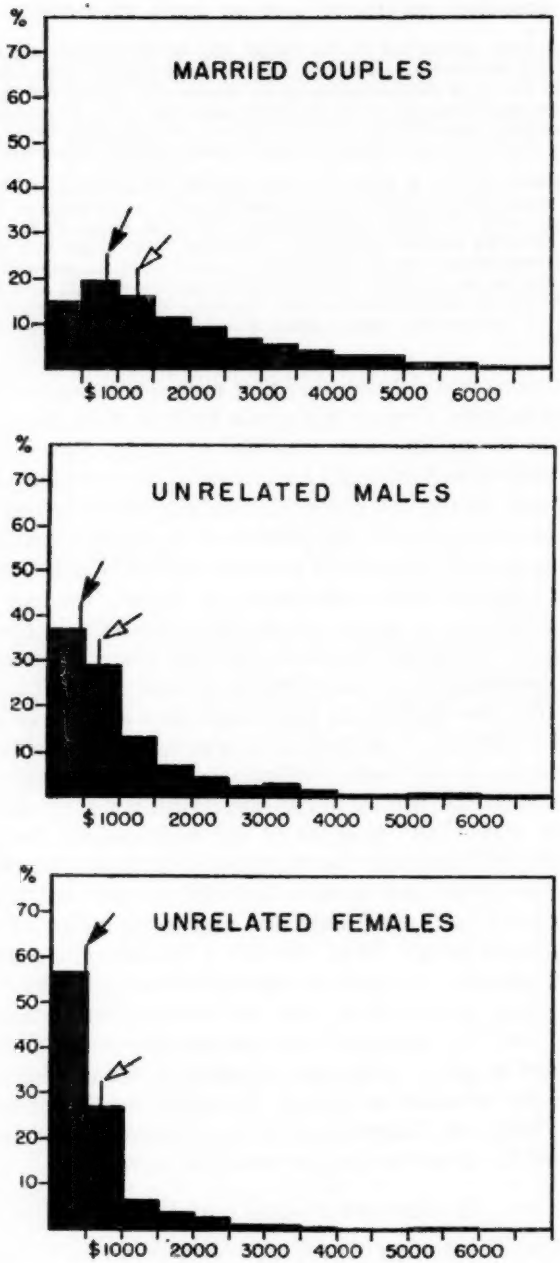


FIGURE 1.
TOTAL RECEIPTS DISTRIBUTIONS, 1951, AGED ECONOMIC UNITS
(See Text for Explanation of Arrows)

$750 for unrelated males, and were about $400 for unrelated females.

While these dollar figures seem remarkably low, they can, of course, not be interpreted in a vacuum; for that reason we turn to the budget levels previously mentioned. Table 2 presents the budget figures for selected categories of units, and even a quick examination suggests that these budgets are hardly extravagant. These budgets are estimates (however low) of the cost of providing for the maintenance of an aged person, regardless of who is actually paying the bills.

Since the issues faced in this paper are of substantial importance and

TABLE 2
SAMPLE BUDGET FIGURES FOR SELECTED SUBGROUPS OF AGED POPULATION
(1951 Dollars)

| Category | Type of Budget | | |
|---|---|---|---|
| | Total Maintenance | Cash Equivalent | Emergency |
| Couples | | | |
| Urban | | | |
| Not living with relatives | 1,850 | 1,725 | 1,200 |
| Living with children | 1,525 | 1,425 | 1,000 |
| Farm | | | |
| Not living with relatives | 925–1,250 | 550–750 | 375 |
| Living with children | 750–1,025 | 450–625 | 325 |
| Unrelated males | | | |
| Urban | | | |
| Not living with relatives | 1,125 | 975 | 675 |
| Living with children | 850 | 800 | 550 |
| Farm | | | |
| Not living with relatives | 550–750 | 325–450 | 225 |
| Living with children | 425–575 | 250–350 | 175 |
| Unrelated females | | | |
| Urban | | | |
| Not living with relatives | 1,075 | 925 | 650 |
| Living with children | 800 | 750 | 525 |

since I have no wish to prejudice any findings by an overly abitrary decision, it seems appropriate to operate dually: with both a high and a low yardstick for measuring adequacy of receipts. For the high value, we use the upper range of the cash equivalent budgets.[2] For the low value we use 70 per cent of the low range of the cash equivalent budget —the so-called "emergency budget." The arrows superimposed on Figure 1 represent the location of these two budget levels.

Yet even if the lower of these budget estimates is used, the number

[2] These values are, of course, somewhat below the total maintenance budgets referred to by the writers previously quoted. The "cash equivalent" budget is defined above. In estimating the relation between cash equivalent and total budgets for nonurban units, two estimates were used because of the substantial dispersion in the importance of consumption of home produced food. The high range is that leading to the higher figure; i.e., that assuming smaller amount of consumption of home produced goods.

and percentage of people with receipts below these levels are impressive. One million couples—more than a quarter of the total—are below even the lowest emergency budget; one-third of the unrelated males and roughly one-half of the unrelated females are below these levels (see Table 3). These are impressive—and depressing—magnitudes.

These aggregated statistics conceal a good deal of diversity with respect to the characteristics of residence and of living arrangement.

TABLE 3
NUMBERS AND PERCENTAGE OF AGED WITH TOTAL RECEIPTS BELOW BUDGET LEVELS

| Category | "Emergency" Level | | Cash Equivalent Maintenance | | Total Maintenance | |
|---|---|---|---|---|---|---|
| | Number Below | Per Cent Below | Number Below | Per Cent Below | Number Below | Per Cent Below |
| Couples | 1,000–1,150 | 27–31 | 1,475–1,650 | 39–44 | 1,675–1,875 | 45–50 |
| Unrelated males | 600–660 | 33–36 | 850–900 | 47–50 | 950–1,050 | 52–58 |
| Unrelated females | 2,125–2,275 | 50–54 | 2,750–2,900 | 65–69 | 3,000–3,175 | 71–75 |

More detailed data (not presented here) reveal quite clearly large differences in receipts of various subgroups. They also reveal that for each subgroup an appreciable portion of the group has receipts below the critical levels. Indeed, the per cent below the emergency budget level is in no case less than one-fifth of a subgroup, and it ranges as high as two-thirds of particular categories.

If these budget levels are not gross overstatements of the receipt requirements of aged persons—and this hardly seems possible—the problem of inadequate receipts is a dominant feature of the problem of the aged. Furthermore, this receipt deficiency is not limited to one or even a few subgroups of the older population but is, in varying degrees, present for all.

These tabulations and the accompanying plates are free from one of the deficiencies of many previous discussions of the problem of the needs of older persons; namely, the failure to include the extent to which any gap in income is met by dissaving or liquidation of assets. These distributions, to repeat, are receipts distributions, which already include the extent to which any deficiency in income has been met through use of savings or the liquidation of assets. However, there is another aspect to this problem which deserves serious attention. To what extent does nonmonetary support from relatives with whom the aged person lives compensate for inadequate receipts?

Potentially this is highly important: 35 per cent of the aged units live with children (about 25 per cent of the couples, 30 per cent of the unrelated males, and 45 per cent of the unrelated females).

## III. *Economic Status of the Aged*

We may define four categories of economic status by combining the previous two-way classification of "above" and "below" critical receipts levels with a classification of "dependent" or "independent" of nonmonetary support.

We attempted in our survey to classify as dependent persons who were not paying their share of joint living expenses or whose bills were being directly taken over by someone else. This attempt was not wholly successful (as indicated *ex post* by the results themselves and by subsequent spot checks) because of the psychological and sociological overtones in the questions, which apparently led numerous persons to fail to report such dependence even where it existed. However, those who reported dependence clearly belong in a dependent category. But this "known" dependent group represents a minimum number in that category and would result in a serious understatement if taken alone.

To avoid such an understatement, we have utilized information concerning the nature of the living arrangements of aged persons. It is evident that persons who are living with relatives have a substantial opportunity for the receipt of nonmonetary support even if they do not explicitly report it. In addition to the group of known dependents, we also classify as dependent units whose receipts are below the critical budget levels *and* who are living with children or with other relatives where such other relatives are reported as the family head. By independent we mean only that no nonmonetary support is received.

The four categories of economic status are:

Group I. *Independent but with receipts below budget levels.* This is the critical group who even in the full-employment year of 1951 was being forced to live submarginally. The size of this group has been understated by the allocation procedure described.

Group II. *Dependent upon nonmonetary support with receipts below budget levels.* This group consists of known dependent and also those assumed dependent by virtue of living arrangements.

Group III. *Dependent upon nonmonetary support but with receipts above the budget levels.* This group includes only persons who directly reported dependence. It is probable that it is therefore somewhat understated; but in view of the relatively high receipt level we do not feel justified in inferring dependence from type of living arrangement alone.

Groups II and III together represent a part (but only a part) of the group that is a direct burden upon other groups in the population.

Little can be said about the level at which they subsist because the extent of the nonmonetary support they receive is unknown.

Group IV. ***Independent of nonmonetary support with receipts above the critical budget levels.*** This group represents the highest category of economic status: persons subsisting entirely upon their receipts at levels above those indicated by the selected budgets.

Table 4 provides selected data on economic status. The following summary touches on only a few of the significant features.

About 15 per cent of each type of economic unit were living solely on their receipts at below the emergency budget. This is cause for real

TABLE 4
ECONOMIC STATUS
(Percentage of Units of Each Type Falling into Groups Defined in Text)

| ALL CATEGORIES | COUPLES | | UNRELATED MALES | | UNRELATED FEMALES | |
|---|---|---|---|---|---|---|
| | Lower* Budget | Higher* Budget | Lower* Budget | Higher* Budget | Lower* Budget | Higher* Budget |
| Group I: Independent—below budget levels | 17.6 | 29.9 | 14.4 | 24.6 | 14.7 | 23.6 |
| Group II: Dependent—below budget levels | (9.4) | (13.4) | (18.7) | (25.5) | (35.8) | (44.7) |
| Assumed by virtue of living arrangement | 6.4 | 9.7 | 8.0 | 13.4 | 10.2 | 16.5 |
| Known | 3.0 | 3.7 | 10.7 | 12.1 | 25.6 | 28.2 |
| Group III: Dependent—above budget level | 1.6 | 0.9 | 6.6 | 5.2 | 6.9 | 4.3 |
| Group IV: Independent—above budget levels | 71.4 | 55.8 | 60.3 | 44.7 | 42.6 | 27.4 |
| | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

* Lower budget is the emergency budget, which is 70 per cent of the lower value of the cash equivalent budget at the maintenance level. Higher budget is the upper value of the cash equivalent budget. (For discussion of these levels see text.)

concern in view of the fact that the size of this group has probably been underestimated owing to, first, the minimal nature of the budgets involved and, second, the assumptions involved in the classification according to economic status. This magnitude is hard to explain away. Use of savings is specifically included in receipts and none of these persons is living with relatives in an arrangement from which indirect support can reasonably be inferred. About the same percentage of persons in each of the three types of economic unit were living solely on their receipts below the budget levels despite the very substantial differences in levels of receipts and in the percentages with receipts below budget levels. To a very large extent the differences in the numbers whose receipts fell below the budget levels are explained by differences in the living arrangements, particularly in the incidence of living with

children in a status that led to the presumption of indirect support. It seems probable that, in an over-all sense, it is a shortage of receipts that leads the aged to live with children, for whom this is the least expensive way of filling the gap between actual receipts and the requirements of aged parents.

The dependent groups account for roughly an eighth of the couples, one-quarter of the unrelated males, and almost one-half of the unrelated females.

The percentage of units classified as independent at above budget levels (Group IV)—that is, the group that is neither being forced to live clearly submarginally nor to live in a dependent relationship with relatives—is not reassuringly large. Only about a third of the females, half of the males, and two-thirds of the couples can claim this limited achievement.

## IV. *Support Status of the Aged*

The economic well-being, or rather the lack of it, of aged persons and couples has been, perhaps, adequately described by the classification according to economic status included in Table 4. But we also look at the problem from the public point of view and one more question is relevant: to what extent is the support of these persons a matter of their own provision and to what extent are they supported by others? A related question concerns the adequacy, in terms of their needs, of existing public support. Support of the kind I now have in mind is predominantly in the form of public assistance and relief payments provided by state and local authorities. This exists in many forms, varying from state assistance to all aged to aid to the needy blind and to the permanently disabled. Persons receiving such assistance might, in terms of our classifications of Table 4, appear in Group IV—the highest economic status we have chosen to define. Clearly, however, such persons are not self-supporting in any meaningful sense of that term and it is worth while to attempt a distinction.

Similar to old age assistance, although less important, are contributions received by aged persons from their families or other persons not living with them. Such regular monetary contributions are treated by the census definitions as part of income, but for our purposes they are a form of direct support different in kind, but not in character, from nonmonetary support.

The classification according to economic status is thus further refined by the following two-way distinction: self-supporting and not self-supporting. Persons previously classified as being dependent (Groups II and III) are necessarily classified not self-supporting. Independent units are considered as being not self-supporting either if

they receive as much as $200 in the form of contributions from persons outside the household or if they receive any income whatsoever from state or local old age assistance or relief programs. Persons not receiving income from either of these sources and previously classified as independent are now classified as self-supporting. (It should be specifically noted that we do not include federal old age benefits or private pensions in the list of factors leading to characterization as not self-supporting.)

TABLE 5

SUPPORT STATUS

(Percentage of Units of Each Type Falling into Groups Defined in Text)

| CATEGORIES | COUPLES | | UNRELATED MALES | | UNRELATED FEMALES | |
|---|---|---|---|---|---|---|
| | Lower Budget | Higher Budget | Lower Budget | Higher Budget | Lower Budget | Higher Budget |
| A. All classes | | | | | | |
| Dependent on nonmonetary support (II, III, of Table 4) | 11.0 | 14.3 | 25.3 | 30.7 | 42.7 | 49.0 |
| Receiving monetary assistance | (14.9) | (13.8) | (20.7) | (16.4) | (20.4) | (16.1) |
| Below budget level | 5.5 | 9.4 | 5.2 | 8.2 | 5.3 | 7.6 |
| Above budget level | 9.4 | 4.4 | 15.5 | 8.2 | 15.1 | 8.5 |
| Self-supporting | (74.1) | (71.9) | (54.0) | (52.9) | (36.9) | (34.9) |
| Below budget levels | 12.1 | 20.5 | 9.2 | 16.4 | 9.4 | 16.0 |
| Above budget levels | 62.0 | 51.4 | 44.8 | 36.5 | 27.5 | 18.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| B. Summary (see Table 4) | | | | | | |
| Group I—Submarginal independent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Not self-supporting | 31.2 | 31.4 | 36.1 | 33.3 | 36.1 | 32.3 |
| Self-supporting | 68.8 | 68.6 | 63.9 | 66.7 | 63.9 | 67.6 |
| Group IV—Supramarginal independent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Not self-supporting | 13.2 | 7.9 | 25.7 | 18.3 | 35.4 | 31.0 |
| Self-supporting | 86.8 | 92.1 | 74.3 | 81.7 | 64.6 | 69.0 |
| C. Summary: Independent by level of receipts | | | | | | |
| Not Self-supporting | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Below budget | 36.9 | 68.1 | 25.1 | 50.0 | 26.4 | 47.2 |
| Above budget | 63.1 | 31.9 | 74.9 | 50.0 | 73.6 | 52.8 |
| Self-supporting | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Below budget | 16.3 | 28.5 | 17.0 | 31.0 | 25.5 | 45.8 |
| Above budget | 83.7 | 71.5 | 83.0 | 69.0 | 74.5 | 54.2 |

The classification of economic units according to this definition is presented in Table 5.

Several things are indicated by this classification. The first point of importance is that a substantial fraction of the aged previously included in Group IV are now classified as not self-supporting. Roughly 30-35 per cent of the unrelated females, 18-25 per cent of the unrelated males, and 8-13 per cent of the couples previously classified in Group IV are

not self-supporting in any meaningful sense. (That is, a significant percentage of the persons living entirely on their receipts at above the budget levels receive those receipts at least in part in the form of public or private assistance.) Put differently, the size of the group which is self-supporting with receipts at least as large as the critical budgets—and remember these budgets are clearly minimal—is not encouraging with respect to the ability of aged persons to self-provide for their needs. Only about 50-62 per cent of the couples, about 36-45 per cent of the other males, and about 19-28 per cent of the unrelated females are self-supporting above budget levels. The size of the residual groups should be considered in view of Mr. Dorfman's warning that increased self-provision through labor force participation is, for the most part, wishful thinking.

A larger group, of course, is self-supporting: roughly three-quarters of the couples, half of the males, and a third of the females are so classified; but as we have seen, many of these have levels of receipts that are inadequate.

Of the group previously classified as submarginal independent, approximately one-third in each type of economic unit are receiving some portion of these receipts in the form of public assistance or private contributions. When considered jointly with the fact that of the group receiving public assistance or contributions a substantial fraction are below budget levels, this finding suggests that public assistance is inadequate in amount as well as in scope. The recipient of public assistance is by no means assured receipts even as large as the lowest budget with which we are dealing. Furthermore, significant numbers of people with clearly inadequate receipts are not receiving any public assistance.

## V. *Sources of Receipts*

Some attention to sources of receipts was implicit in the previous discussion of support status. Let us examine sources somewhat more explicitly.

The following five sources of receipts, while not all-inclusive, are most important to the aged. In 1951, receipts from each of these were in excess of 1 billion dollars. The amount from each source (rounded to nearest $100,000) in millions of dollars of aggregate receipts is as follows: (1) earnings, $7,000; (2) asset income, $1,800; (3) use of savings, $1,100; (4) pensions (including social security), $2,400; (5) public assistance and relief, $1,200.

There are, to be sure, certain arbitrary features to such a distinction, but I shall not pause to explore them now except to note that the distinction between asset income and use of savings is made appropriate by

census policy of including the former but not the latter in its designation of income.[3]

The analysis of sources of receipts is both complicated and enriched by the fact that a variety of dimensions may be considered. For example, one may be concerned alternatively with the number of people who have some receipts from a specified source, the number of persons having particular sources as their principal source, the size distribution of receipts from each source, the size of total receipts of those with particular sources as principal source, or the typical role of sources (i.e., the extent to which they tend to be a sole source, a principal source, or a secondary source). And finally, one may be concerned also with the extent to which particular individuals or groups tend to have receipts from multiple sources.

A wealth of material is available on these matters. In the space available I certainly cannot do justice to it. Much of this material, however, is in the accompanying summary Table 6, and while I shall not attempt to cover it systematically, I shall suggest certain generalizations without pausing to document them.

A large part of the difference in receipts of couples, unrelated males, and unrelated females is explained by two factors: first, the number of sources and, second, the role of earned income. Thirty-two per cent of the unrelated females had no source of receipts amounting to as much as $200. The comparable percentages were 19 per cent for unrelated males and only 9 per cent for couples. For those with receipts there was a higher propensity to have two or more sources for couples than for unrelated males and for unrelated males than for unrelated females.

Even more striking is the differing role of earnings. Fourteen per cent of the females, 38 per cent of the males, and 60 per cent of the couples had some receipts from earnings. These differences are accentuated by the fact that for females many of those with earnings had them in nominal amounts. In general, for each group, having earnings is the most important precondition for high levels of receipts. Not only do earnings have the highest average values for each group, they also tend uniformly to be associated with the highest levels of total receipts; that is, the total receipts of those for whom earnings is the principal source are much the highest for each group.

In aggregate amounts, earnings totaled more than 7 billion dollars in 1951—slightly more than half of the total receipts of the aged. More than 5 billion of the earnings were accounted for by couples, about 1 billion by unrelated males, and about ½ billion by unrelated females.

[3] In theory, asset income should reflect yield from assets whereas use of savings reflects consumption of the principal. But even, here difficulties arise, for annuities which are, strictly, a combination are treated as asset income.

TABLE 6

SELECTED DATA ON SOURCES OF RECEIPTS

| | Per Cent Having This Source | | Per Cent of Aggregate Receipts of Group | Size of Source | | Per cent of Those with Source, Having Source in Amount of | | Mean Amount of Total Receipts for Those with Indicated Principal Source |
|---|---|---|---|---|---|---|---|---|
| | at All | as the Principal Major Source | | Median Size of Receipts from Source | Mean Size of Receipts from Source | Less $200 | $2,500 or More | |
| Earnings | | | | | | | | |
| Couples | 60.3 | 42.1 | 63.8 | $1,820 | $2,514 | 7.1 | 37.5 | $3,260 |
| Unrelated males | 37.6 | 22.8 | 51.6 | 1,323 | 1,885 | 10.8 | 24.4 | 2,082 |
| Unrelated females | 13.7 | 7.8 | 18.0 | 469 | 995 | 23.1 | 8.2 | 1,651 |
| Assets | | | | | | | | |
| Couples | 26.1 | 8.6 | 9.4 | 517 | 822 | 23.0 | 5.9 | 2,268 |
| Unrelated males* | 17.1 | 6.2 | 9.3 | 387 | 673 | 27.5 | 6.2 | 1,543 |
| Unrelated females | 21.5 | 12.6 | 26.4 | 509 | 851 | 15.7 | 8.7 | 1,236 |
| Savings | | | | | | | | |
| Couples | 15.2 | 4.4 | 5.6 | 531 | 782 | 20.1 | 6.0 | 1,989 |
| Unrelated males* | 13.7 | 5.8 | 6.5 | 400 | 578 | 25.0 | — | 1,196 |
| Unrelated females | 13.7 | 7.0 | 15.1 | 472 | 681 | 20.4 | 4.8 | 1,187 |
| Pensions | | | | | | | | |
| Couples | 36.5 | 22.6 | 16.0 | 837 | 1,001 | 7.0 | 4.2 | 1,536 |
| Unrelated males | 35.0 | 25.8 | 21.3 | 654 | 780 | 5.5 | 1.8 | 913 |
| Unrelated females | 22.1 | 14.6 | 19.5 | 581 | 634 | 8.0 | 0.8 | 739 |
| Assistance | | | | | | | | |
| Couples | 17.1 | 12.0 | 4.9 | 603 | 668 | 7.1 | — | 929 |
| Unrelated males | 26.5 | 19.3 | 10.9 | 468 | 512 | 8.9 | — | 539 |
| Unrelated females | 26.4 | 23.4 | 19.4 | 489 | 528 | 7.8 | — | 567 |

* Sample dangerously small.

The size of these magnitudes reflects, of course, very clearly the different labor force participation of the groups. As suggested previously, there seems little reason to believe that the size of the groups without earnings is likely to be significantly reduced and thus either they must rely on accumulated assets or savings or on pensions to which they are entitled or they must become direct burdens on either public or private relief and assistance.

Asset income, though less important than earnings aggregatively (about 1.8 billion), plays an important role in two ways. For unrelated females, asset income is an important sole source of receipts and is aggregatively the most important source of receipts. For couples, asset income is frequently received, though often in smaller amounts, and it appears as an important second source of receipts. Roughly a fifth of the unrelated females and the couples received asset income in significant amounts. (For unrelated males, asset income is relatively unimportant, perhaps by virtue of their typically greater age or perhaps because, lacking familial obligations, the integrity of assets has not been preserved.) Like earnings, the distribution of asset income is highly dispersed and is not infrequently found in large amounts. The median amount, however, is about $500, which, for males, is about a third of the median amount of earnings.

A remarkable feature about dissaving is that it plays roughly the same role for each group. Slightly more than 10 per cent used savings in amounts of $200 or more and the typical amount of dissaving was somewhere around $500. However, despite the fact that dissaving in the aggregate amounted to over a billion dollars, it appears to have made a relatively small impact upon total receipts except in the small percentage of cases (about 6 per cent) in which it was the principal source. Savings generally are a secondary source and are typically much smaller in amount than the principal source. Use of savings rarely accounted for as much as 10 per cent of the total receipts of those with savings (except for the small group which relies chiefly upon them). If the data uncovered by our survey in this connection are reasonably accurate, they suggest that savings play a much smaller role in ameliorating the low incomes of aged persons than has been assumed.

The three sources—earnings, assets, and use of savings—lumped together constitute sources that might be described as self-provision for age, and, considered collectively, roughly one-third of the unrelated females, half of the unrelated males, and two-thirds of the couples are living partly or wholly upon such sources. What of the future? Is there any reason to expect self-provision for age to become either relatively or absolutely more important? With respect to earnings we have already answered negatively. With respect to assets and savings, it seems

possible that if, in general, price levels are more stable in the future than they were over the last two decades, the amounts available from these sources may be more nearly adequate. But it also seems likely that with the increasing importance of pension programs there will be less incentive for self-provision. (Pensions, of course, will increasingly deserve to be called self-provision as the size of payments bears a closer relationship to the contributory payments.) This loss of incentive may, of course, be illusory. But I believe that a consequence, and perhaps a dangerous one, of contributory pension plans, both private and governmental, is that the recipient feels that he is protected for his old age. The total receipts of those currently receiving pensions hardly supports such a view.

Pensions, which include most importantly old age and survivors insurance benefits, rank high in importance in each group but they are especially important for males. Roughly one-fifth of the females and one-third of the males and couples receive pensions in amounts more than $200. The importance of pensions is underlined by the fact that they are frequently a major source and also frequently a sole major source. Pensions are consistently the second most important source in frequency counts—second to earnings for males and second to public assistance for females.

In secular terms, the importance of both public and private pensions is bound to increase steadily as more persons come under the coverage of pensions plans. However, in aggregate terms, in 1951, pensions were already the second most important source of receipts (about 2.4 billion dollars). An estimate of the potential future size of the pension stream has been made in a recent study by the National Planning Association (*Pensions in the United States,* United States Government Printing Office, 1952 pages 42-43). Estimating on the basis of maintenance of 1951 purchasing power as promised in the present law, it estimates approximately 8 billion dollars of governmental payments by 1975 with perhaps an additional 3 billion in private pension plans. Assuming further that the program is continually liberalized and that additional occupations are included, the estimate may be as high as 14 billion under the federal program. The present relevance of this estimate is to suggest that this source, and this source alone, shows important promise of secular increase. Indeed, to a large extent, this predicted increase may occur at the expense of receipts from each of the other sources, particularly public assistance. There is no doubt that such an increase in the pension program will have important ameliorative effects, but the mean total receipts of those presently receiving pensions as a principal source are sufficiently low (about $700 for unrelated females, $900 for unrelated males, and $1,500 for couples) to

suggest that every encouragement be provided for arranging for supplementary sources of receipts.

Finally, in this list of sources, the prevalence of public assistance is striking. A quarter of the unrelated females, a quarter of the unrelated males, and 17 per cent of the couples were receiving some public assistance. This is remarkable, especially in view of the marked tendency for assistance, when received, to be the sole source of receipts. This is evident in the very low levels of total receipts for those receiving assistance—about $500 for unrelated individuals, less than $1,000 for couples. The number of persons receiving public assistance is large for all groups in view of these facts. Public assistance is infrequently trivial in amount but is never large. The size of the group receiving assistance and the related fact that only a fraction of those with inadequate receipts are receiving assistance are measures of the general inadequacy of the receipts of a large part of the aged group. This notwithstanding the fact that the size of public assistance programs reflects the increasingly successful efforts of professional pensioneers to expand the coverage of state programs. Let those who regard professional pensioneers with alarm not wonder at the source of their success!

## VI. *Conclusion*

On the basis of a survey taken in 1951, a period of full employment and high prosperity, we cannot escape the conclusion that the receipt deficiency of persons 65 and over is real and current. The amelioration of this deficiency will occur chiefly through increased public provision in some form. The one bright spot in our survey of sources of receipts is the expected sharp secular increase in the size of pensions, especially social security payments, as a source of income. I cannot derive as much encouragement from these estimates as their size suggests for several reasons. First, because to some extent an increase in pensions will occur at the expense of existing sources. Second, because it will largely take the form of wider coverage and the receipt position of those presently eligible is hardly described as comfortable. And third, because effective expansions in the program are dependent, not only upon an economy of full employment and stable prices, but also upon a real intention on the part of the American people and their government to shift the burden of old age from the aged to society as a whole, to the extent of our economic ability to do so. I hope my lack of confidence on this score is merely lack of vision.

# AGE AND INCOME

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My colleagues have told you of the economic plight of the aged in absolute terms. My job is to appraise their economic status relative to the rest of the population. For reasons of space, I shall concentrate upon only one aspect of this status—income—leaving the others for our forthcoming monograph. Like my colleagues, I shall confine my discussion to 1951—or thereabout—and not consider (statistically) the intertemporal changes in the economic condition of our "senior citizens"; this deficiency will also be made good at a later time. However, at the end, I shall make a few remarks of a historical nature.

## I

Summarized the sage
Before many a page
Low is the wage
Received in old age.

The principal economic difference between the aged, as such, and others is that the aged do less work. This is reflected, in various ways, in the size distributions of receipts. For example, among all males (over 14 years) with income in 1951, only 6.9 per cent had no earnings (wages, salary, or income from self-employment); but almost half (47.2 per cent) of the males in this category who were over 65 earned nothing. Over four-fifths of the females over 65 (with income) had no earnings, but this was true of only 21 per cent of all females over 14.

A major consequence of this is shown in Table 1, where we display median incomes and earnings for different age and sex classes. One fact that emerges clearly from a comparison of (median) income and earnings for males is that in every age class before 55 median income slightly exceeds median earnings, but in the last two classes this relation is reversed. What happens is fairly clear: during a man's "working years," his nonearned income is typically a small supplement to his earnings. But in the 55-64 age class, the nonemployment typical of old age makes its appearance, forcing an increased percentage of persons to depend entirely on small nonearned incomes; this lowers the median income of all males (in that age class) relative to the median of those who are still able to earn. Among "old folks" proper (over 65), the

earners fare far better than those forced to depend solely upon other sources of income.

In short, except for those over 65, the majority of men in every age class receive only their earnings. And most of those who do have nonearned income have but little of it. So long as a man keeps working,

TABLE 1

MEDIAN EARNINGS AND INCOME BY AGE AND BY SEX IN THE UNITED STATES, FOR PERSONS WITH $1.00 OR MORE, FOR 1951

| | Under 25 | 25–34 | 35–44 | 45–54 | 55–64 | 65 and Over | All Ages |
|---|---|---|---|---|---|---|---|
| Earnings | | | | | | | |
| Male | $1,338 | $3,267 | $3,587 | $3,259 | $2,942 | $1,681 | $3,046 |
| Female | 884 | 1,631 | 1,586 | 1,550 | 1,229 | 464 | 1,322 |
| Income | | | | | | | |
| Male | 1,343 | 3,288 | 3,617 | 3,280 | 2,840 | 1,008 | 2,952 |
| Female | 907 | 1,623 | 1,538 | 1,327 | 968 | 536 | 1,045 |

SOURCE: Bureau of the Census.

TABLE 2

PERCENTAGE DISTRIBUTION BY AGE, SEX, AND TYPE OF INCOME OF PERSONS WITH INCOME IN 1951

| | Under 25 | 25–34 | 35–44 | 45–54 | 55–64 | 65 and Over | All Ages |
|---|---|---|---|---|---|---|---|
| Male | | | | | | | |
| Earnings only | 94.2 | 82.4 | 87.7 | 86.8 | 77.1 | 32.9 | 80.0 |
| Other income, no earnings | 1.5 | 1.1 | 0.7 | 1.8 | 7.6 | 47.2 | 6.9 |
| Earnings and non-earnings | 4.3 | 16.5 | 11.7 | 11.4 | 15.2 | 19.9 | 13.1 |
| Female | | | | | | | |
| Earnings only | 91.3 | 86.8 | 86.4 | 77.8 | 55.4 | 11.9 | 72.4 |
| Other income, no earnings | 5.3 | 8.3 | 7.6 | 14.3 | 29.9 | 80.8 | 20.9 |
| Earnings and non-earnings | 3.4 | 4.9 | 6.0 | 7.9 | 14.6 | 7.3 | 6.6 |

SOURCE: Bureau of the Census.

nonearned income is a pleasant supplement to earnings; but in old age, it often becomes the only (and inadequate) source of support.

Women's receipts exhibit a different age pattern than men's. Median earnings exceeded median income in every age class except for the youngest and the oldest.[1] I place the following interpretation upon this

[1] The reader may be puzzled by the possibility that (median) earnings may exceed (median) income. The clue to the "mystery" is that the aforementioned medians refer only to persons with $1.00 or more of earnings or income as the case may be. Consequently, median earnings may exceed median income if there are a large number of low incomes which include no earnings.

fact: only to a much smaller extent than men, do women receive both earned and nonearned incomes. (The relevant percentages of males and females are given in Table 2.) Thus, for women throughout most of their lives, nonearned income is a substitute for rather than a supplement to earnings. However, in the highest age class the level of median earnings falls so low as to be even less than the median level of nonearned income.

A further characteristic of Table 1 that mirrors differences in the extent of "nonemployment" is the age pattern of earnings. The data presented refer to the median earnings of those with $1.00 or more in 1951; persons with no earnings at all are not included. Median earnings in a given age class are affected by nonemployment in that persons

TABLE 3

RELATION BETWEEN NONEMPLOYMENT IN APRIL 1952 AND MEDIAN EARNINGS IN 1951*

| | Under 25 | | 25–34 | | 35–44 | | 45–54 | | 55–64 | | 65 and Over | | All Ages | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratio of persons in armed forces or not employed in April, 1952, to all persons with earnings in 1951 | .24 | .34 | .07 | .21 | .04 | .17 | .04 | .16 | .06 | .18 | .20 | .36 | .09 | .23 |
| Ratio of median earnings, in 1951, of persons in all occupations† to median earnings of all employed civilians | .73 | .64 | .99 | .84 | .99 | .88 | .99 | .86 | .97 | .79 | .83 | .67 | .97 | .78 |

* All figures refer only to persons with $1.00 or more earnings in 1951. Left-hand entries in each age column refer to males; right-hand to females.

† "All occupations" includes all employed civilians plus members of the armed forces and persons not employed (in or out of the labor force in April, 1952) with $1.00 or more earnings in 1951.

SOURCE: Bureau of the Census.

not employed during the survey week but working at some time during the preceding year are likely to have worked only intermittently and hence to have had relatively low annual earnings. A class with a relatively high percentage of such workers is likely to be a class with a large number of low earners and therefore a class with low median earnings.

This contention is borne out by Tables 3 and 4: the former of these shows the strong negative association between the percentage of persons not employed or in the armed forces in April, 1952 (but with earnings in 1951), and median earnings in 1951. Table 4 illustrates the same point in a slightly different way: it shows that there is appreciably less of an age variation in earnings among 1951 earners who had civilian employment in April, 1952 ("All employed civilians") than among all 1951 earners (i.e., "All occupations"). Table 4 also indicates that in each age and sex class, median earnings are higher among "All employed civilians" than among "All occupations."

TABLE 4

MEDIAN EARNINGS IN 1951 FOR ALL OCCUPATIONS AND ALL EMPLOYED, WITH EARNINGS, BY AGE AND SEX*

| | UNDER 25 | | 25–34 | | 35–44 | | 45–54 | | 55–64 | | 65 AND OVER | | ALL AGES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) All occupations | $1,338 | $ 884 | $3,267 | $1,631 | $3,587 | $1,586 | $3,259 | $1,550 | $2,942 | $1,229 | $1,681 | $464 | $3,096 | $1,332 |
| (2) All employed civilians | 1,827 | 1,382 | 3,299 | 1,949 | 3,621 | 1,807 | 3,299 | 1,793 | 3,036 | 1,551 | 2,031 | 690 | 3,146 | 1,692 |

* Left-hand entries in each age column refer to males, right-hand to females. "All occupations" is identical with "All employed civilians" plus "Nonemployed."
SOURCE: Bureau of the Census.

TABLE 5

FIRST AND NINTH DECILES OF TOTAL MONEY EARNINGS IN 1951, BY AGE AND SEX (OF PERSONS WITH EARNINGS)*

| | UNDER 25 | 25–34 | 35–44 | 45–54 | 55–64 | 65 AND OVER | ALL AGES |
|---|---|---|---|---|---|---|---|
| Males | | | | | | | |
| 1st Decile | $ 175 | $1,380 | $1,385 | $1,070 | $ 585 | $ 185 | $ 595 |
| 9th Decile | 4,350 | 5,360 | 6,300 | 6,180 | 5,780 | 4,700 | 5,740 |
| Females | | | | | | | |
| 1st Decile | 130 | 225 | 320 | 215 | 170 | 85 | 180 |
| 9th Decile | 2,425 | 3,150 | 3,745 | 3,325 | 3,315 | 2,040 | 3,025 |

* Computations were made by interpolating in the decile classes by proportional parts. Figures were rounded to the nearest five dollars.
SOURCE: Bureau of the Census.

Tables 1 and 4 both indicate that the variation (with age) in both median income and median earnings is less among women than among men. The reason for this is that at all ages, a substantial part of the female earners (apparently) works only intermittently. After 35, this characteristic becomes intensified, reducing median earning still further. (It is interesting to note that in the more refined age break in Table 4 there are two peaks of median income—one at age 22-24 and the other at 35-44. It is plausible to suppose that the trough between these peaks reflects a withdrawal from the labor force during the childbearing years and a subsequent return after children are past infancy.) Young men (under 25) share, to some extent, the labor force characteristics of women and oldsters, and their median income shows it; i.e., because of the relatively large number of students in this age class, there are numerous part-time earners and hence a low median income.

The effect of part-time earners on the age pattern of earnings is shown very clearly in the behavior of the highest and lowest decile of the earnings distribution. First consider males: As a comparison of Table 5 and Table 1 shows, the top decile fluctuates far less with age than the median which, in turn, oscillates less than the lowest decile. This is because the highest decile is virtually free of the intermittent earner and therefore shows a far less marked ascent and descent in earnings (than the median) at the beginning and end of working life. Conversely, the lowest decile is very strongly influenced by occasional earners and is therefore highly sensitive to age.

Table 5 clearly implies that the dispersion of earnings, as measured by 9th decile minus 1st decile ÷ median, tends to diminish (among men) between the youngest class and those in the prime of life but to widen again after 55 and become very marked among the aged. In view of this, I think it would not be going too far to state that earnings are more unequally distributed among the old and the young than among the intermediate age groups.[2] As we shall see, it is probable that the identity of the persons in the upper and lower deciles differs at different ages: below 25, the upper decile has few college graduates (who are still in school), but these forge to the top within a decade after graduation and remain there. Furthermore, in any given year, the lowest decile will contain the temporarily (as well as the permanently) unfortunate.

Among women, the highest decile behaves in a manner roughly similar to the corresponding percentile among men. It seems reasonable to

[2] W. S. Woytinsky (*Employment and Wages in the United States*, [Twentieth Century Fund, 1953], Chap. 44) presents OASI data which point to a similar conclusion. His data also show less dispersion in given age classes and less age sensitivity of given deciles among workers with earnings in all four quarters of a year (i.e., steady workers) than among all workers. Obviously, this finding points in the same direction as the argument of this paragraph.

suppose that its rise between the two youngest age classes mirrors the exodus of untrained low earners from the work force (see below), while the sharp decline at the upper end of the age scale reflects the entry of the intermittent worker into the upper decile. The lowest decile of female workers probably consists at all ages of occasional earners. In short, the dispersion of earnings among women increases with age in the prime of life, because some women remain full-time workers while others become "occasionals." However, as old age approaches, dispersion[3] is reduced as the erstwhile full-time earners become "reduced" to intermittent temporary jobs.

## II

The economic advantage
of the educated
Appears reasonably clear
though somewhat belated.

I have ridden hard the idea that interage variations in earnings and income are due primarily to variations in the "propensity to work." However, this is not the sole source of such variation. There are differences in the age-income profiles in different occupations in different city sizes, in rural and urban communities, etc. While we cannot cover all of these matters here, the differences in income patterns among different socioeconomic strata are so important as to require some discussion.

In statistical work, the usual correlate of socioeconomic status that is chosen for analysis is occupation; in our monograph, there will be an extensive discussion of the age profile of earnings in different occupations. However, for several reasons, we here analyze a different correlate of socioeconomic status; i.e., education, as indicated by the number of school years completed. There are three reasons for studying the variation in age patterns of income by level of education rather than by occupation: (1) Candor compels the admission that one reason is that the Census Bureau has already published extensive tabulations on the relations among income, age, and number of school years completed but has not done this with occupation as a variable. (The data for 1951 on age, income, and occupation from the 1952 *Current Population Survey* are now under analysis, but because of the small sample size, are presenting some difficulties which we hope eventually either to overcome or to by-pass.) (2) It is by no means certain, either, that occupation is more indicative of earning power than education or that the latter is an inferior substitute for the former. For our purpose, both education and occupation are simply socioeconomic characteristics associated with

[3] The arbitrariness of our dispersion index may here play us false. Were we studying the highest percentile, we might well have found mostly full-time earners in the highest age class and hence increasing dispersion.

earning power, and neither of them is fundamental. Of course, years of schooling and occupational grade are strongly associated, and any great difference in the age profile of income resulting from a switch from one to the other would require explanation. (3) Years of schooling may, in some respects, actually be a more convenient and reliable indicator of earning power than occupation. For example, years of school completed can be more easily and accurately reported by an enumerator than occupation. Also, years of school completed is directly measurable and, therefore, more manageable conceptually.

Table 6 presents the relevant income[4] data for 1949. As this table shows, after the age of 25 there is in each age-sex class an almost perfect (and positive) rank correlation of median income and the number of school years completed. Before 25, many college students are not working full-time and in this age group, the college graduates have a (median) income disadvantage. The age at which peak median income is reached does not appear to vary greatly with schooling;[5] among males, it was reached in all "schooled classes" (except one) in the age class 45-54 years and among females a roughly similar pattern seems to hold. But despite the fact that the peak median income for almost every single education class is reached in the 45-54 age group (among males), the peak median income for all "education classes" combined is reached in the 35-44 group. This reflects what we otherwise know to be true: that the "high income and highly educated" groups comprise a larger percentage of the younger than of the older age classes.

Among males, the (median) income advantage of the college trained clearly increases with age;[6] in particular, it is greater in the over-65 classes than in the younger ones. Females behaved differently; the income advantage of the more educated women (generally) rose with additional schooling—especially for college graduates—up to age 65, but it fell appreciably between 55-64 and the next older class. A major reason for this decline is that college trained women have, in the prime of life, a much greater tendency to be steady workers than others; this is one reason for their very great income advantage over

[4] The data in Table 5 refer to total money income and not merely earnings; i.e., they include property income. This is unfortunate but not disastrous; property income is more heavily concentrated in the upper age (and probably more schooled) classes than earnings. Attempts to deduce earnings from income must take this into account, but our argument will not be materially impaired by this difficulty.

[5] This is somewhat surprising, as one would suppose that the more educated workers would reach their peak earning power later than others. It may be that they do, but the coarse (10 year) age class intervals obscure it. It may also be that the younger members of the highly schooled classes are generally more successful earners which, since there are relatively more of them, tends to create a peak of median income at a younger age than that at which most individuals reach their own peak incomes.

[6] As measured by the ratio, median income (of college graduates) minus median income of all persons in given age class ÷ median for all persons in given age class.

TABLE 6

MEDIAN INCOME IN 1949: PERSONS FOURTEEN YEARS OLD AND OVER WITH INCOME, BY YEARS OF SCHOOL COMPLETED, AGE, AND SEX, FOR THE UNITED STATES, 1950

| SEX AND YEARS OF SCHOOL COMPLETED | TOTAL, 25 YEARS OLD AND OVER | 14–17 YEARS OLD | 18–19 YEARS OLD | 20–21 YEARS OLD | 22–24 YEARS OLD | 25–29 YEARS OLD | 30–34 YEARS OLD | 35–44 YEARS OLD | 45–54 YEARS OLD | 55–64 YEARS OLD | 65–74 YEARS OLD | 75 YEARS OLD AND OVER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male, total | $2,699 | $311 | $721 | $1,316 | $1,917 | $2,538 | $2,968 | $3,085 | $2,980 | $2,553 | $1,379 | $ 757 |
| No school years completed | 1,108 | 345 | 485 | 679 | 848 | 1,016 | 1,133 | 1,267 | 1,465 | 1,736 | 827 | 491 |
| Elementary: 1 to 4 years | 1,365 | 327 | 543 | 826 | 1,027 | 1,281 | 1,453 | 1,562 | 1,741 | 1,727 | 846 | 569 |
| 5 to 7 years | 2,035 | 305 | 703 | 1,055 | 1,409 | 1,763 | 2,038 | 2,252 | 2,371 | 2,172 | 1,164 | 690 |
| 8 years | 2,533 | 305 | 881 | 1,364 | 1,840 | 2,255 | 2,557 | 2,803 | 2,912 | 2,601 | 1,505 | 800 |
| High school: 1 to 3 years | 2,917 | 308 | 727 | 1,471 | 2,145 | 2,573 | 2,922 | 3,178 | 3,209 | 2,927 | 1,771 | 947 |
| 4 years | 3,285 | 411 | 767 | 1,617 | 2,309 | 2,892 | 3,308 | 3,523 | 3,687 | 3,436 | 2,262 | 1,217 |
| College: 1 to 3 years | 3,522 | 341 | 461 | 786 | 1,413 | 2,764 | 3,591 | 3,962 | 4,099 | 3,601 | 2,362 | 1,328 |
| 4 years or more | 4,407 | — | — | 854 | 1,526 | 2,928 | 4,227 | 5,142 | 5,549 | 5,142 | 3,597 | 1,892 |
| School years not reported | 2,329 | 988 | 755 | 1,351 | 1,691 | 2,185 | 2,633 | 2,794 | 2,698 | 2,389 | 1,321 | 727 |
| Female, total | $1,089 | $301 | $618 | $1,164 | $1,378 | $1,334 | $1,285 | $1,357 | $1,310 | $1,011 | $ 619 | $ 574 |
| No school years completed | 518 | 296 | 446 | 418 | 438 | 456 | 599 | 536 | 693 | 692 | 452 | 419 |
| Elementary: 1 to 4 years | 547 | 306 | 411 | 464 | 492 | 486 | 594 | 650 | 707 | 616 | 440 | 449 |
| 5 to 7 years | 725 | 292 | 418 | 490 | 583 | 671 | 775 | 900 | 882 | 765 | 494 | 491 |
| 8 years | 909 | 297 | 592 | 839 | 924 | 959 | 1,067 | 1,193 | 1,171 | 942 | 599 | 566 |
| High school: 1 to 3 years | 1,086 | 295 | 485 | 973 | 995 | 1,037 | 1,123 | 1,266 | 1,275 | 1,036 | 682 | 639 |
| 4 years | 1,584 | 399 | 782 | 1,527 | 1,661 | 1,626 | 1,587 | 1,719 | 1,799 | 1,472 | 876 | 789 |
| College: 1 to 3 years | 1,660 | 310 | 390 | 684 | 1,580 | 1,677 | 1,723 | 1,775 | 1,869 | 1,607 | 1,051 | 827 |
| 4 years or more | 2,321 | — | 672 | 854 | 1,724 | 2,098 | 2,207 | 2,470 | 2,668 | 2,591 | 1,499 | 1,092 |
| School years not reported | 1,084 | 402 | 522 | 1,154 | 1,434 | 1,436 | 1,410 | 1,403 | 1,464 | 1,161 | 687 | 649 |

SOURCE: 1950 U.S. Bureau of Census, *Special Reports, Education* (*Special Report*, P.E. No. 5B), Table 13, page 5B–128.

other females.[7] But at 65 many of the college trained women retire,[8] causing a drastic fall in their median earnings (and income); but, as the noncollege women had (in effect) retired sooner (or had always been "retired"), their incomes, to a large extent, already reflected the conditions of old age and therefore did not decline as much.

Let me repeat the main points of this section: (1) Median incomes (and, incidentally, the highest and lowest deciles) rise with increased schooling for both sexes in all age classes. (2) Among men the relative income advantage of college graduates is greater after 65 than before; among women this advantage is less after 65 but is still very considerable.

## III

The stylus descends to a well-worn groove
"As we progress, we are bound to improve!"

It would be most astonishing if we could find three economists—and some unkind souls might quote an even lower figure—without at least one and a half opinions on any given subject; we are no exception. My colleagues have stressed the sad plight of the aged and rightly emphasized the magnitude of the problem it presents and the difficulty of surmounting it. As a description of the current state of affairs, it is unexceptionable; however, I should like to place the facts presented in a historical perspective, where they seem somewhat less depressing.

All the data we have presented on the aged refer to 1951 (or thereabouts). In an important sense, persons over 65 in 1951 were simply a segment of the American labor force as it existed forty to fifty years earlier, when they entered it. The males in this segment of the labor force, schooled in the first decade of this century, had a median of 8.1 years of schooling and the females, 8.3 (males over 75 had a median of 7.9 years of schooling and females, 8.2 years). Males and females of 20-21 years in 1950 had 12.1 and 12.2 median years of schooling, respectively;[9] these youngsters are very unlikely 45 years from now to be replicas of the present crop of aged. Insofar as his behavior

[7] The median income of women college graduates was more than twice that for all women in the 45-54 and 55-64 age groups; the corresponding advantage for college men was not that great in any age class.

[8] The percentages of females with four or more years of college training in the following age classes who were employed in 1950 are given in the left-hand column. These figures may be compared with those in the right-hand column which refer to all females in the same age classes.

| | College | All |
|---|---|---|
| 45-54 | 55% | 32% |
| 55-64 | 44 | 22 |
| 65-74 | 23 | 11 |
| 75 and over | 6 | 2 |

SOURCE: *U. S. Census Special Report*, P.E. No. 58, *op. cit.*, p. 5B-74.

[9] *U. S. Census Special Report*, P.E. No. 5B, *op. cit.*, Table 5.

can be predicted from his educational status (see below), the median youngster will be more likely when aged to continue working than his present-day counterpart. Also (see Table 6), his income will be higher relative to the median of all income receivers and will have been higher throughout most of his life.

I do not wish to suggest that, in any given age cohort, aging per se does not affect economic status. But I do wish to point out that the level of income after age 65 is strongly (and positively) associated with its earlier level. Highly educated workers are more likely to stay employed after 65 than others and hence to earn more. (This is, of course, implicit in Mr. Dorfman's argument.) Consequently, the general secular rise in educational attainment and the factors associated therewith are likely, of themselves, somewhat to ameliorate the conditions Mr. Steiner has described. This is certainly not intended as a plea for complacency. Whether the tendencies to which I refer will do enough ameliorating—and fast enough—to satisfy a sensitive conscience is very debatable.

Comparing interage income variations in a given year exaggerates in an economy such as ours the relative income disadvantage of the aged. Viewed against the background of the 1951 American economy, the economic status of the aged seems far worse than if, say, 1913 or 1929 were chosen as a backdrop; but it is in an economy of this older type that the aged lived most of their lives. In short, the inability of the aged to share equally in the fruits of economic progress, as well as an absolute decline in median real income with age, is responsible for their underprivileged position in the economy.

These remarks suggest a profitable direction for further research; namely, to compare the lifetime income and earnings patterns for distinct age cohorts—and even given individuals—with the interage comparisons for a single year. We have such research in progress and hope soon to present some findings on historical earnings patterns for specific age cohorts.

## DISCUSSION

FLOYD A. BOND:* The three papers which you have just heard are designed to establish three fundamental propositions: (1) Employment is no solution to the problem of old age insecurity—economic, social, or psychological. (2) Income of the aged, including savings, is not adequate for a great many individuals, 65 and over. (3) The income of the aged is considerably smaller than that of the rest of the population (primarily because of lower earnings).

With these three basic propositions, I have no quarrel. I think all three speakers presented ample evidence to substantiate them. The speakers also presented a wealth of statistical information about the aged, along with a number of related propositions, which are both relevant and illuminating. They have thrown light on a number of matters about which it has been necessary to speculate in the past.

More than this, I would say that the level of exposition in all three papers is high, that great skill is evident in the way in which all three men handled extremely difficult points—both of analysis and of presentation—and that the quality of the logic is unusually good. Clearly these men are able scholars, whatever may be the merits of at least one of them as a poet!

But enough of this. Let us turn to more controversial issues. You are interested in a critical evaluation of their reports, not praise.

Because of the limitation of time, and also because of the great importance of the matter, I shall limit my comments to the problem of interpretation—to the dangerous impression which could easily result from these reports and the misleading uses to which these findings could be put, rightfully or wrongfully, but largely because of the emphasis in the papers on the negative side of employment possibilities. If these papers result in any substantial lessening of the concern, activity, or optimism and determination of those individuals and organizations who are doing their best to keep as many oldsters in productive employment as possible, it is greatly to be regretted.

This is not intended to say or imply that the problem of economic insecurity, or any other kind of insecurity, in old age can be solved by employment alone. The fact that the aged cover a range of thirty years, 65-95, that a large number of them are not well enough to work, particularly those in the upper reaches of the age scale, that a majority of them are women, and that a very high percentage of the women have never been in the labor force, is proof to the contrary.

Yet the employment of older workers is still tremendously important and every effort should be made to enable as many as possible to remain in the labor force. We should not lose sight of the fact, in our concern for those

* EDITOR'S NOTE: Dr. Bond is director of a two-year study, "Old Age Assistance: A California Study of a National Problem," being undertaken by two economists, two political scientists, and two sociologists, under a grant from the John Randolph Haynes and Dora Haynes Foundation.

not in the labor force, that 40 per cent of the males and 8 per cent of the females 65 and over are working—a point noted but not stressed by Mr. Dorfman. Nor should we lose sight of the fact that earnings of the aged population in 1951 amounted to over 7 billion dollars—or slightly more than half of the total receipts of the aged, including use of savings, as pointed out by Mr. Steiner. Will the current trend toward compulsory retirement reduce these figures? Will the "pension philosophy," which also seems to be growing, reduce them? These are still vital questions, and it would be unfortunate if the growing effort to cope with these and similar problems were to fade because of an unwarranted pessimism as to their importance or the possibility of improvement along these lines.

You may wonder if pessimism is an obstacle to improvement. Apparently many close to the problem seem to think so. After noting the gloomy predictions of the demographers as to the future declines in the proportion of the aged in the labor force and after considering the reasons, one legislative research group concludes: "All of these are powerful factors which mitigate against the older persons in search of remunerative work. But more important than these is pessimism."

Even if the proportion of the aged in the labor force cannot be substantially increased, we should not discourage any effort toward checking the downward trend. Perhaps the proportion of the aged in the labor force will continue to drop, in spite of all efforts to prevent it, as it has been doing for the last sixty years; nevertheless, to the extent we can keep people 65 and over self-supporting, the better off we will be.

Probably the real point at issue, however, is the question as to what extent, if any, the proportion of the aged in the labor force can be increased.[1] Mr. Dorfman finds "that 5 per cent of the men over 65 are not in the labor force but consider themselves well enough to work and would be interested in full- or part-time work" and concludes that 5 per cent of 5.8 million is "not a contemptible number"—as I think all of us would agree. But he is convinced that the great public concern for the aged who are not in the labor force and for the great economic waste resulting from this fact is misplaced. I quote: "Here then is the core of the economic problem of the aged, and it looks like a hard core. The various devices which have been suggested for persuading employers to retain older employees do not, in the light of these figures, touch the heart of the problem. The problem is not one of a great reservoir of wasted resources but of men whose working lives are in a very real sense over."

Not wishing to pose as an expert in this field, it simply remains for me to mention some of the questions which those who have given much higher estimates (of the waste resulting from failure to use aged workers) would raise if they were in my shoes. They would undoubtedly make some of the following points.

The concept of "feel well enough to work" is admittedly a subjective one

[1] Both Mr. Dorfman and I are anxious to see the aged have the opportunity to work, and the larger the percentage of them who take advantage of it, the better. We probably differ primarily, then, in the magnitude of the potential.

and admittedly could lead to error in either direction, but more likely in one. Some might point out, for example, that there is no good reason for believing that the health of the aged today is any poorer than in 1890 when almost 70 per cent of the males 65 and over were in the labor force. If this is true, then close to 30 per cent (70 − 40) of the aged males, who are not in the labor force, are not there for reasons other than health. If so, the economic waste is many times greater than these papers indicate. Moreover, with the rising standard of living and the advances in medical science, the aged of the future should be healthier than in either 1890 or today. And with the rising educational level they should also be more adaptable to new kinds of work.

Others might point to Table 5 which indicates that only 15 per cent of the aged men are "unable to work," that is, possess some "specific major disability," as contrasted to the 77 per cent who do not "consider themselves well enough to work." Attitudes tend to reflect one's state of mind as well as medical facts. If these aged males who do not consider themselves well enough to work had something challenging to look forward to—some activity which is at once useful and absorbing—might not some of them change their attitudes? One of the best ways of improving their outlook would be to make them once more feel needed—an essential part of things—rather than useless and unnecessary. And one of the best ways of achieving this is through gainful employment. For example, the men in Schenectady who were forced to retire at 65 because of compulsory retirement rules but who organized a company of their own, the Mohawk Development Company, and are now doing contracting work for both private corporations and the government, undoubtedly have much better "attitudes" as a result of their gainful work. Or one might point to the Sunset Industries of Haverhill or other experiments of similar kinds in other communities.

Still others might argue that even those individuals with specific disabilities are not completely hopeless. To illustrate, they might point to a county home in Allegheny County, Pennsylvania, where 308 bed-ridden patients, many of whom had not left their beds for months or years and had lost all desire to better their lot, were "rehabilitated"—with greater savings in the cost of drugs and nursing care than spent on the program—with these results: 80 per cent were restored to ambulation; 15 per cent were restored sufficiently so that they could return home; 13 per cent were restored to a point where they could and did obtain work. The result was thus better for all concerned.

Even more important, probably all of these individuals would agree that prevention is better than cure, and that it is easier and far more sensible to keep individuals in the labor force than to retire them and then try to put them back again after a number of months. Compulsory retirement rules are thus of considerable importance, for they force retirement of all regardless of health and thus make the break unavoidable.

Striking evidence to this effect is to be found in the preliminary findings of the Twentieth Century Fund survey of old age and survivors' insurance pensioners as reported in *Criteria for Retirement* (a report of a National Conference on Retirement of Older Workers, page 68). Health was found

to be second to compulsory retirement rules as the primary reason for retiring. Of those who retired from nonagricultural employment, 57 per cent did so because of compulsory retirement age as against 25 per cent who did so because of health. In the case of managers and executives, health was an even less important factor, the figures being 67 and 10 per cent, respectively. Health was relatively more important in the case of laborers and operatives, 48 per cent giving compulsory retirement age as the reason for retirement and 35 per cent giving health as the reason.

As long as men and women prefer work and income to the leisure that retirement brings, every effort should be made to provide them the opportunity to work and to help them take advantage of it. If the speakers this evening are correct, efforts to increase the proportion of the aged in the labor force will fail. Those efforts may also fail even if their contention is incorrect. All it will take is a continuation of the present trend. But in any case, it is better to have tried and failed than never to have tried at all.

ELISABETH WALLACE: Since my time is limited, I propose to comment very briefly on problems raised by Mr. Reder and Mr. Steiner, to discuss more fully a number of questions arising out of Mr. Dorfman's analysis, and to say a word or two about comparable Canadian and British experience. These three interesting papers suggest, as Mr. Steiner points out, some dismal conclusions. Chief among these is the fact that old people's financial resources are painfully inadequate and the prophecy that, owing to the prevalence of ill-health, little improvement can be expected through larger numbers continuing to work after the age of about 65.

From Mr. Steiner's conclusion that too many old people in the United States have to live on too little, I do not see how anyone can dissent. I am not aware of any similar study made in my own country, Canada, but I suspect that its situation is much the same. There has, however, been marked improvement in Canada since the introduction, two years ago, of an old age security scheme which entitles every Canadian, regardless of income, who is 70 years of age or over, to a monthly pension of $40. In Great Britain, on the other hand, old age insurance (with a flat rate benefit) may be supplemented, as in the United States, by special provision for old age assistance, which in the United Kingdom includes both cash grants and rent allowances. Recent British studies suggest that acute poverty among old people has now become a thing of the past.[1] Thus the picture there seems a little less dismal.

I was interested in Mr. Reder's comment that well-educated men and women tend to retire later than those less educated. Part of the explanation doubtless lies in the fact that doctors and lawyers and business executives are often able to decide for themselves when they will retire, although teachers and librarians probably have little voice in the matter. But I wonder how closely later retirement is related to the chief advantage enjoyed by professional folk: that they earn their living by working at what interests them

[1] B. Seebohm Rowntree (ed.), *Old People,* Report of a Survey Committee on the Problems of Ageing and the Care of Old People, published for the trustees of the Nuffield Foundation (London: Oxford University Press, 1947), pp. 23-24, 29.

most. Retirement for business and professional people may mean giving up their hobby and their recreation, as well as their source of income. There is every inducement to postpone such an eventuality. Yet perhaps the same thing can be said of the good farmer, especially the man who owns his land, although he may have had little formal education. There are doubtless a variety of reasons why a man often continues to do some work about his farm at an age when most industrial workers have retired. But one significant reason is that for him his farm means not only his livelihood but his way of life. In this matter I suspect that he, like the professional man or woman, is differentiated from the factory hand, though the latter may well regret coming to the end of a lifetime's occupation. Yet the factory worker's position may be more rather than less difficult, in that he not only has a smaller amount to retire on, but may also have fewer interests to occupy his leisure time.

Mr. Dorfman's paper raises a number of interesting questions. I should like to comment first on his stress on the poor health of the people over 65 whom he studied. He observed that more than three-quarters of the men who were not working felt that they were not well enough to do so, that consequently their primary difficulty was not lack of suitable work, but lack of adequate health, and that "the problem is not one of a great reservoir of wasted resources but of men whose working lives are in a very real sense over." I would suggest that there is surely a problem of wasted human resources when there are so many in ill-health. Most doctors seem to agree that early retirement is likely to hasten both physical and mental deterioration. Is it not possible that some of these older men might have remained more fit physically if they had not had to give up their normal work?

This consideration, however, might not be significant in the case of people who retired because they already felt they were not well enough to work longer. Mr. Dorfman has pointed out that, except for professional and technical workers, who form only a small fraction of the total, much the most important reason why people leave and remain out of the labor force is poor health. It may well be that the working lives of these men and women are of necessity ended, although recent strides in medical knowledge perhaps give some hope of a more optimistic conclusion. In recent years life expectancy has increased, owing to advances in medicine, and it seems probable that health expectancy may also increase. But whatever the prospects are for returning to employment people who have already retired owing to ill-health, must we assume that nothing can be done to prevent their children and grandchildren from coming to the same unfortunate end? I would suggest that the facts presented by Mr. Dorfman form a very strong argument for an adequate program of public medical care. His findings support the conclusions of other studies that there is a direct and close relationship between ill-health and low incomes. He found that where the income was $5,000 or over, only 8 per cent of the men over 65 were not well enough to work. At the other end of the scale, three-quarters of the men without income were not well enough. Between these two extremes, he showed that ill-health increases as income decreases. Retirement for reasons of health was noticeably

more prevalent among manual workers, who received the lowest income and who were presumably least able to afford adequate medical care.

Mr. Dorfman commented that "except insofar as income affects health, it is not income which determines the rate of labor force participation, but, rather, the other way round: the level of income depends predominantly on whether the man is working." But it seems to me that Mr. Dorfman has shown quite conclusively that income affects health to a marked degree. Given a good program of public medical care, this need not be true. His analysis demonstrated that people in the higher income brackets have been remarkably successful, at least in comparison with their poorer neighbors, in remaining well, up to and beyond the age of 65. Despite the large amount of ill-health among older men which this study has revealed, Mr. Steiner's paper showed that earnings were the chief source of income for almost half the old couples and for almost one-quarter of the men living alone. The best way to raise the standard of living of older people is, when possible, to increase their earning capacity. Since many of the physical disabilities of the elderly have their origin in conditions contracted when they were young and subsequently neglected, it is not unreasonable to expect that better medical care during the period of youth and middle age might prevent or mitigate much of the ill-health of old age. Such provision would appreciably brighten the present gloomy picture of a large group of men and women over 65 who are not well enough to work, although they need the money and the country needs their labor.

The second major point in Mr. Dorfman's paper on which I want to comment is his conclusion that for women over 65 "the possibility of employment has only a scant bearing on the problems they face." The majority of the unmarried women and widows in the group studied had not been gainfully employed since they were 50. Most of them were untrained for any particular occupation, and Mr. Dorfman therefore considered that they represented a negligible source of potential additions to the working population. I wonder whether this is likely to be true in the future of most older women, or whether the present situation largely reflects the fact that forty-odd years ago, when those now in their sixties were in their twenties, it was relatively unusual for women to be employed outside their own home. There has surely been a marked change in this respect during the past half-century. Nowadays single women commonly earn their own living, and a number of women who were trained for some employment before their marriage return to work when their children are old enough or after they become widows. During the war and postwar period, industry engaged both younger and older women on a greatly increased scale. I would therefore suggest that although only a small number of women now over 65 may be willing and able to take paid employment, this situation in recent years has been changing and is likely in the near future to change even more. It is not unreasonable to envisage future generations where the general health is better and where an appreciably larger number of women are trained for jobs and are disposed to pursue them when they are older. Must we, then, dismiss as wishful thinking the possibility that both men and women, by working to a later

age than is now customary, may be able to make increased provision for their eventual retirement?

The three papers presented were based on a study of people aged 65 and over. It does not seem likely that large numbers over 75 can continue to earn their living, though many of those between 65 and 75 may want and be able to do so. But employment offices are beginning to describe as "older" workers not only those over 65, but all who find that their age makes it difficult for them to obtain work, which at the present time typically means women over 35 and men over 45. The age at which this difficulty occurs varies with the individual, the district, the type of work, the attitude of the employer, and the state of the labor market. About one-third of the population is in the 45-and-over age group, and with the modern extension of years spent at school few young folk under 18 are earners. In these circumstances there is a serious question whether a country can maintain or improve its standard of living if the people between 20 and 45 years of age have to support all the others. If they do, both productivity and the ability to consume goods and services will be reduced, while a decreasing proportion of the population has to bear the burden of production and of taxation. A large unproductive group of older men and women may well become a major economic as well as social problem. Economic considerations apart, most folk are happier and healthier when they are working than when they have nothing to do but to reflect that they are useless and that nobody wants them.

The most effective argument that many people over 65 can do work which gives satisfaction both to themselves and their employers is the large number who actually do so. Some million American workers eligible for benefits under the old age and survivors' insurance program elected instead to remain at their jobs. In Great Britain and Canada, as in the United States, during the war and postwar labor shortage, men and women all over the country emerged from retirement to give satisfactory service in a wide variety of occupations. Public welfare agencies in all three countries can cite numerous examples of people who for years had been classified as unemployable owing to age or other disabilities, yet who conclusively proved by securing jobs during the war that they were both able and willing to work.

I am more familiar with conditions in Canada and Great Britain than in the United States. I may, therefore, most usefully contribute to this discussion by commenting very briefly on some aspects of Canadian and British experience which may interest those concerned with similar economic problems of older workers in this country. We may all agree with Lloyd George's remark that how we treat our old people is one of the crucial tests of national quality.

Six years ago the Canadian National Employment Service began in the city of Toronto the experiment of providing employment counseling for people 45 years of age and over, who normally compose more than one-third of the unplaced applicants registered with the government Employment Service. The group included professional men and women as well as skilled and semiskilled workers. This was the first such counseling scheme undertaken by a public agency in either Canada or the United States. The plan worked so well that

similar services were later extended to other Ontario cities, and last year to larger centers in the western provinces. These counseling services did not actually make placements; they simply tried to help people decide for themselves what they wanted and were qualified to do. After counseling, about two-thirds of these older men and women, 60 per cent of whom were over 60 years of age, obtained permanent employment. Of these, two-thirds found their own jobs.[2] For the past seven years the Canadian federal Department of Labour and the National Employment Service have conducted a campaign against popular fallacies which make it hard for men and women over 40 to find work. Among the most common of these are the beliefs that older workers are particularly prone to accidents, that they have a high rate of absenteeism, and that they find it difficult to learn new techniques. Canadian trade-unionists have strongly urged that as long as older workers can contribute to the productive capacity of the nation, they should be allowed to do so.

We tend to think that employment problems of the elderly are a twentieth-century development. But sixty years ago older people in Great Britain already had difficulty in finding work. In 1893, Charles Booth told the Royal Commission on the Aged Poor that the whole position of old people was unsatisfactory and that a man's age was often of itself enough to keep him from obtaining employment. "Old age," he submitted, "fares hardly in our times." (Great Britain, Royal Commission on the Aged Poor, *Minutes of Evidence*, III, London, 1895, pages 578-581.) Booth was also anxious about the burden of supporting the old which fell on those in active life. Increased modern concern with this problem is reflected in some recent British studies, notably in the 1949 *Report* of the Royal Commission on Population and in the *First Report* of the National Advisory Committee on the Employment of Older Men and Women, published in October, 1953. Cmd. 7695; Ministry of Labour and National Service, London, 1953.) These studies argue forcibly that everything possible should be done to encourage older people to remain at work when they can, since the need to increase the working population of Britain is permanent, not temporary. To this end they suggest that both employers and trade-unions must show imagination in making the conditions of work flexible enough to meet the needs of older men and women.

Most British students of the subject are convinced, like many of their American colleagues, that the chief obstacles to the extended employment of older people lie in attitudes of mind. They think that only more adequate understanding of the issues involved is likely to change prevalent misconceptions on this subject. The British Ministry of Labour and National Service is committed to the view that since more people now live longer, so also must more people work longer than the traditional retiring age of 60 or 65. The three major British parties all officially support a policy of replacing a fixed retirement age with a more flexible scheme under which those able and willing to work may have an opportunity to do so. (See the present Conservative

[2] A more detailed account of this counseling service may be found in "The Problem of the Older Worker," *Labour Gazette*, February, 1953, pp. 203-216. The viewpoint of trade-unions in Canada is expressed by A. R. Mosher, president of the Canadian Congress of Labour, *Canadian Unionist*, May-June, 1952.

Government's recent White Paper, the Liberal Party report on *The Aged and the Nation*, and the 1951 budget speech of the Labour Chancellor of the Exchequer.) Evidence presented this year to the British National Advisory Committee suggested that the majority of people able to work effectively at the age of 60 could go on until they were 70. No evidence was found to indicate that the pensionable ages in public and private schemes were those at which most people ceased to be able to give competent service. The Committee concluded that capacity, not age, should determine an individual's fitness for work. It recommended that no one able to serve effectively, either in his normal occupation or elsewhere, should be forced to retire against his will, and that no set age of retirement should be established either by regulation or convention. Workers covered by both public and private pension schemes should, in the Committee's opinion, receive an additional financial inducement (in the form of a higher ultimate pension) to remain at work beyond the minimum pensionable age. Some incentive of this sort is already provided under the National Insurance Act of 1946, but there is a good deal of opinion which favors increasing this inducement.

Efforts to win acceptance for such views have recently been made in Great Britain, where the government as an employer has been adjusting its own employment practices. A fixed retiring age has been abandoned in the permanent Civil Service. Sixty is still the minimum pensionable age, but civil servants are encouraged to remain on the job longer (if they are still efficient and there is work for them to do) by offering them a higher ultimate pension if they defer retirement. For recruitment to temporary government posts there is now no age limit at all. Local government authorities have recently raised their employees' maximum pensionable age from 65 to 70. Thus by its own practice the British government has tried to set an example to private employers. It has also shown that it agrees with the Advisory Committee's contention that "neither from a human nor an economic angle can a limitation of employment opportunities for older people who want to work be regarded as a tolerable permanent solution for unemployment. . . . Increased leisure may be a good thing, but enforced leisure in the form of unsought unemployment is at any age wasteful and harmful from the point of view of the nation as well as of the individual."

## ROUND TABLE DISCUSSION OF THE BOWEN REPORT ON GRADUATE TRAINING IN ECONOMICS

JOHN PERRY MILLER, *Chairman*

The *Report on Graduate Education in Economics*, by Howard Bowen, provides a comprehensive study of the present state of graduate training in economics and a good deal of information about the state of the economics profession in general. It also includes a series of recommendations for improving practices in the selection and training of students. Although the Association served as a sponsor and publisher, the report was carried on under Professor Bowen's personal direction and he alone assumed responsibility for the conclusions and recommendations. The study was made possible by a grant from the Rockefeller Foundation and was published as a Supplement to the *American Economic Review*, Volume XLIII, Number 4, Part 2, September, 1953.

Panel members were asked to speak briefly on those matters raised by the report which they considered of crucial importance.[1] The following remarks are not intended as a comprehensive summary or critique of the report. They are designed solely to high light the major issues developed by the panel members.

The discussion indicated a widespread interest in the report and the problems raised therein. While there were sharp differences of opinion on several specific recommendations in the report, it was generally acknowledged that the Association and the profession are deeply indebted to Howard Bowen for a report which is highly informative, judicious, and provocative. A majority of the participants, including all those who spoke to the issue, urged that the Association not let the matter of graduate education drop with the publication of the report but that it take steps to help implement several recommendations in the report which call for common action.

Panel members were quite concerned with the problem of recruitment and with the type of undergraduate training most appropriate for those entering upon graduate study. It was agreed that the profession needs more able recruits. But it was emphasized that too much reliance should not be placed upon expanded fellowship programs and other devices designed to raid other professions of their potential talent. As one part of an approach to better recruitment, it was urged that we "develop a statesmanlike program to draw upon the underdeveloped talent of the nation." Moreover, in the full realization that outstanding intellectual ability is limited in supply, it was urged that we "must be prepared to do more with the sort of minds the world has to offer. A lot of pedestrian work has to be done in economics, and we shall have to learn to use different grades of skill. . . . I do not believe that we have done as much as we should for the able but not brilliant students who populate our graduate departments." It was also emphasized that there should

[1] Participants are listed in the program. Dr. Morton Baratz served as *rapporteur*.

be more effort to acquaint prospective recruits with the nature of the profession and the types of careers available, particularly those of a nonacademic sort.

On the matter of the type of undergraduate preparation most suitable for students entering upon graduate work in economics several participants disagreed with the recommendations of the report. While the report stresses undergraduate training in a specified core of courses (pages 85-89), several of the participants were disposed to minimize the need for extensive undergraduate training. One member suggested that "something like one-eighth of his undergraduate program is enough." Those taking this view were influenced in part by their belief that the end product of our graduate schools should be men who in addition to having high professional skill are "civilized" men, broadly educated and of mature judgment. There seemed to be a feeling that we have been more successful in putting out men of high technical skill than in developing men who have a broad and judicious view of social problems and are effective in communicating with decision-makers concerning these problems. Consequently, it was the view of several that the prospective recruit should be encouraged to spend his undergraduate years in acquiring the noneconomic training which he needs if he is to become a mature economist.

Discussion concerning the traditional requirement of a reading knowledge of French and German developed quite divergent views. All agreed that the widespread present practice of maintaining strict formal requirements which are, however, only half-heartedly enforced, is intolerable. In the report Howard Bowen made several alternative proposals, most of which would have involved easing the formal requirements. He did propose, however, that students should be required to meet high standards of fluency in such language requirements as are maintained. Panel members who discussed the topic took various views. Although some would allow substitutions for French and German, the majority apparently favored maintaining the traditional requirement of two languages with enforcement of high standards of fluency. But there was a minority view that there should be a "reconsideration of the 'traditional hurdle' of the foreign language requirement for candidates in economics."

There was a consensus that much could be done to raise the standards of graduate education generally. Several felt that this is one area in which the Association could assist. There was, however, no disposition to ask that the Association undertake to enforce a system of accreditation or otherwise seek to enforce standards of any kind. But it was felt that in various less formal ways the Association might assist graduate departments in raising their sights and their standards. While one participant agreed with Bowen that the standards for the M.A. should be raised by requiring three semesters of work and an essay, another felt that the M.A. "is assigned too much importance; for many it is and it should be viewed as a terminal degree."

There was a consensus that the graduate schools should seek to provide a more adequate research environment and research experience for their students. Various proposals were made to this end, including the requirement of a research seminar, participation in joint or co-operative research ventures, and the incorporation within the graduate school of a research institute.

The concentration of graduate training in a few large schools came in for discussion. "A small graduate department," said one panel member, "has some marked advantages over the very large department. The 'Big Four,' turning out as they have most of the Ph.D.'s in economics during the last five years represent an unhealthy concentration of educational training." He stressed in particular both the "inadequate attention that the graduate professor in our mass production institutions must give the individual student" and a tendency "to standardization of the thinking of graduate students on important contemporary economic issues." A member of the staff of one of the Big Four urged in reply that he doubted whether an economist can be "produced." He suggested that interstudent communication, with informal faculty participation in student-oriented seminars, was a more effective method of education than formal teacher-student relations. He did not explain how this could be done with a large student body. Another participant suggested the encouragement of more organized migration by students. He urged that students undertake their preliminary work and the writing of their dissertations at one of the smaller schools where they could have closer supervision, while spending the second year attending advanced courses at a larger institution.

The responsibility of our graduate schools to give more attention to the pursuit of "policies and practices designed to develop effective teaching of economics," a problem emphasized by Professor Bowen, was underscored by several of the participants. It was pointed out that graduate training tends to be narrow and professional in its orientation, while the teaching demands made upon many young men call for breadth and co-ordination of knowledge and, above all, for great judgment.

Three or four panel members who have had substantial nonacademic as well as academic experience urged that more attention be given to training students who can communicate effectively with policy-makers in government and business and who will take positions of responsibility in such organizations. This led to the suggestion that the training of graduate students should not be completely standardized, since they are destined for many uses. Moreover, several participants suggested the need for combating excessive departmentalization and encouraging economists to co-operate more, both in research and in teaching, with the related social sciences and with the professional schools of business, engineering, and law.

Finally, it was emphasized that graduate training is only one phase in the life-long process of learning by members of the profession. If our profession is to fulfill its responsibilities for leadership and to be held in proper respect, economists must lend their support to improvements of education in the secondary schools and the undergraduate colleges. They must also be concerned with devising means to continue more effectively the learning process during the postdoctoral years.

## ROUND TABLE ON ECONOMICS IN GENERAL EDUCATION

BEN W. LEWIS, *Chairman*

The Chairman called attention to the continuing interest of the Association in the teaching of economics, as evidenced by the succession of Association committees concerned with and the sessions of the annual meetings devoted to the subject. The present session has its origin in the activities of the Association committee appointed to work with the recently established Commission on Economics in Teacher Education and in the experience of several members of the Association who have participated in summer workshops concerned with the improvement of the teaching of economics in the secondary schools. The questions posed for discussion have to do with the content and teaching of the introductory college course in economics. Professional educationalists who have worked with economists in the economic workshops have been highly critical of this course as they have known it in teacher-education programs. How can it be made to attract and to serve the interests of those (both general students and future teachers in the secondary schools) for whom it is the terminal course in economics and of those who will go on to advanced courses?

Following introductory statements by each of the four scheduled participants, each raised questions with the others, and thereafter the meeting was thrown open to questions and statements from the floor. The scheduled speakers made points along the following lines.

S. P. MCCUTCHEN: General education seeks to fit individuals to live in contemporary democratic society—a society composed of people who live democratically, with respect for the dignity and worth of individuals, concern for the welfare of others, skill in effective social participation, and reliance on trained intelligence. The content of the economics program for general education (probably no more than a six-semester-hour course) may presume some prior experience and understanding, and its selection should be guided by the very special purpose of the program. Content and method should be varied, with primary emphasis upon the problem approach. The understanding of economic principles will best be attained when the instructor places a major emphasis upon psychologically sound course organization and classroom method rather than when he simply follows his own enthusiasms.

E. T. WEILER: The first course in economics is not satisfactory; typically it is designed for the major student and is not designed for the general student. A descriptive course, although it is easy to teach and is comprehensible to the student, is not the answer. Nor is a condensation and simplification of partial equilibrium analysis or the public policy oriented course the answer. The student must know too much about economics and ethics before he is in a position to discuss public policy issues intelligently. Such a course can easily become propagandistic. In place of teaching less theory, I believe we should teach more theory, but this should not become an exercise in analytical

geometry. The answer is to be found in the development of a course principally concerned with the problem of allocation. The general equilibrium model is very useful in this connection. After showing how a price system functions, we can then consider how various characteristic institutions modify our beginning model; e.g., monopoly, government transactions, money and monetary institutions, international trade, and the factors underlying economic growth. We can then consider public policy issues without the biases implicit in a problem-by-problem approach. Such a course, integrated around allocation, will make sense both to the major and to the general student and will serve the purposes of both.

EDWIN G. NOURSE: We have the testimony of the professional teachers of high school students that the high school does not now give these students a minimum basic understanding of the nature of the economic process as it operates under our current business and governmental institutions. They come to us with the prayer that we supply them with the substantive materials which they can communicate to their students. Thus far they have not found us well prepared to be of service at this strategic spot in the functioning of our enterprise economy. The reasons for our failure lie, first, in the fact that many of our economists have succumbed to the occupational disease in which scholarship degenerates into scholasticism—retiring to their closets to formulate ever more elegant equations for each other's edification and ever more esoteric philosophizings about a comprehensive world of abstraction remote from any mundane economic society. When, through their students and their students' students, their product, cut down, is passed on to high school students, the offering is naturally repudiated. Another great class of economists devote themselves to becoming expert technicians in the mysteries of input-output analysis, market measurement, and the macroeconomic divinations of the economic statesman. However useful to business executives or the national policy-maker, these are not what the students and teachers of general education want or need. If our classes in economics attract few students, if our young people do not find economics interesting and useful, it is because we are not making our subject what it can and should be. Another reason we fail at the high school level is our undiscriminating feeling that economics is beyond the mental grasp of teenagers and that attempts to teach it to them will lead to mischievous oversimplification. There is a considerable body of information and some simple processes of reasoning that can be assimilated by the high school student and that are essential later to the conduct of his business affairs and his behavior as a citizen. We economists should accept the challenge of the leaders of secondary and general education and, in consultation with them, we should cull out from our resources the basic elements that can be made into a structure of thought about economic matters which come within the range of the average man and citizen.

CLARK LEE ALLEN: That the poor quality of instruction in economics at the secondary level is not to be attributed to the nature of the economics courses at the college level is evidenced by two considerations: high school teachers of the social studies generally do not take enough college work in economics to do them significant harm and a college course either in theoreti-

cal or institutional economics can be valuable to prospective teachers in the secondary schools if it is taught with competence and enthusiasm. The purposes of general education can be served by either a theoretical or descriptive course. My own preference is for a theoretical course, but the interests and enthusiasm of the instructor should determine the type to be offered. As a matter of fact, all undergraduate courses in economics should be of the nonspecialist, general education type (as should the undergraduate courses in education!). So far as the content of the introductory course is concerned, it is more important to reduce the amount of material than to quibble over what should be omitted. In general, the broad areas to be covered are price, income, and public policy. As to alleged overemphasis on geometry and technical apparatus, the interest and competence of the instructor should determine. The introductory student should learn how an economist thinks and how he goes about the solution of problems. Particular topics and techniques are not prime considerations. A great teacher teaching what he knows and loves best will produce an excellent course.

# ECONOMIC AND REGULATORY PROBLEMS OF THE BROADCASTING INDUSTRY*

MARVIN L. FAIR, *Chairman*

H. H. GOLDIN: Two current broad-gauge problems of the Federal Communications Commission are the establishment of a nation-wide television service and the fostering of competition in the broadcast field.

In April, 1952, after three and a half years of travail, the Commission issued a nation-wide television plan, providing for over 2,000 stations in 1,250 cities. On the basis of present demand, between 700 and 800 TV stations may go into operation within the next three years in 375 cities. In order for television to expand into smaller communities, particularly cities of under 25,000 population, major innovations are required to reduce current high levels of television construction and operating costs and to tap new economic support.

One aspect of the broader problem of extending television is the "UHF problem." Approximately three-fourths of all TV stations allocated must operate in a higher portion of spectrum, which was not open to commercial exploitation until 1952. The difficulty faced by UHF licensees is one primarily of economic incompatibility in the face of over 25 million sets outstanding requiring adaptation or conversion at an additional expense to the set owner. Certain UHF licensees who have encountered financial difficulties have turned to the Commission for assistance.

The Commission's policy in such matters is dictated by its view that broadcasting is a competitive industry, and in granting an application the Commission does not offer any assurance to the licensee of earning a fair return on his investment. If, however, it should appear that the economic difficulties of the UHF licensees are widespread and threaten the future of the service to the detriment of the public interest, the Commission may take steps designed to aid the UHF service.

It is clear that by one means or another eventually television, like radio, will be extended broadly to serve the entire nation.

The Commission has played an important role in maintaining and fostering competition in the broadcast industry. Its jurisdiction in this respect is not limited to striking down monopolies after they have been perfected, but to watch for indications of approaching monopoly and to adopt policies that will halt such developments. Among the measures which the Commission has taken to foster competition is to prohibit a licensee from owning more than one station in the same area; to limit the total number of stations licensed to a single individual; to encourage diversification of ownership in the mass media (as, for example, between the ownership of radio and newspapers); and to promote the fullest freedom of the individual licensee.

The benefits which the Commission expects to flow from competition relate both to the business practices and to the programming of stations. On the business side, the existence of competition is presumed to provide a greater assurance that undue concentration of economic power will be avoided. On

* EDITOR'S NOTE: No abstract was received of the paper by Ronald H. Coase or of the discussion by Sidney S. Alexander.

the programming side, the competition of stations vying with one another for audience is expected to encourage programming attractive to the public and reflecting community tastes and needs. Further, by limiting multiple-station ownership and by discouraging cross-ownership of communications media, the Commission seeks to maximize diversity of program sources and ideas, to foster the free flow of news, and to encourage the airing of diverse and conflicting views, attitudes, and opinions in the public interest.

By fostering a competitive structure in the industry the Commission hopes thereby to minimize the need for regulatory activity by the Commission in the day-to-day operation of stations.

Economic concentration in the broadcasting industry is significantly less than in many other industries. This results from both Commission policies and the inflexible production characteristic of a broadcast station whose service unit is a multiple of a fixed twenty-four hour day.

Nevertheless, there are significant elements of control and economic disparity in the broadcast field. Particularly significant is the dominant role of the national networks. Broadcasting in addition to being a business is one of the most important modern media of mass communication. Viewed in this light, as a source of information, ideas, and attitudes, the ability of a single network to reach a majority of the nation's audience with a steady stream of program fare dwarfs into insignificance any other consideration of concentration in the broadcast industry. The Commission's chain broadcast regulations have not been particularly effective in fostering new networks.

Peter O. Steiner: Mr. Goldin deals with many issues under two broad headings: first, establishment of a nation-wide television service and, second, fostering of competition. I would like to be able to discuss them separately, but I wonder if they are really separable. Does not the form of national television service established condition the nature of competition that will emerge?

One way of looking at broadcasting is as a modified public utility. Alternatively, it is a modified private industry in which desired results are expected to emerge from free interplay in the market. The real challenge in the regulation of broadcasting is the opportunity to achieve desired results through constructive regulation of the structure of the industry.

The gargantuan struggle to "restore" competition to radio broadcasting through the regulations on chain broadcasting is evidence of the difficulty of basically changing through regulation the behavior and performance of an established industry. That the Commission's concern about competition in A.M. radio developed after the industry had fully developed structurally was unavoidable. Television, however, was the Commission's second chance. Not only was the power to regulate established, but the whole record of the radio experience was at hand. Furthermore, the Commission had these two invaluable assets—authority and experience—before the maturation of the industry in the case of television. Such an opportunity is, so far as I know, without precedent. How well was it used?

Hindsight is easy. The regulations concerning chain broadcasting substantially failed to accomplish what they intended. It is not hard to identify the reasons for their failure. Presumably some consideration of these reasons would have been useful in determining policy concerning the establishment of a nation-wide television service—and industry—in such a way as to achieve the degree (and kind) of competition that seems appropriate.

## NATIONAL TRANSPORTATION POLICY

I. L. Sharfman, *Chairman*

Lionel W. Thatcher, *Rapporteur*: Both Charles L. Dearing and Sidney L. Miller stated that the troublesome area of transportation policy was the problem of subsidy or public aids. The federal government has expended increasing sums of money on all types of transportation except the railroads and pipe-line companies, and because of improper planning or policy in the placement of these funds, each form of transportation does not have an equal opportunity to compete for traffic on an equal economic basis. Hence the regulatory pattern is made more complicated, the competitive pattern is distorted, and the general taxpayer rather than shipper is paying for much of the costs. Therefore, if these publicy incurred costs are to be assessed in an equitable way, we must accept the principle of user charges.

Professor Miller has gone "all out" for elimination of public aids, particularly the federal contribution. He has taken an extreme position, I believe, since he fails to consider fully the benefits derived from certain types of public aids, and the effect the elimination of subsidy or public aids would have on communities and business enterprise.

The subject of user charges is an extremely controversial one and many complex problems are involved in the universal application of the principle. There is a difference of opinion, not only on the definition of costs and the amount of the costs to be assessed upon users of the services or the classes of users, but also about the problem of where taxes leave off and user charges begin. To avoid subsidy, user charges must be adequate to cover all the costs to all units of government and they must be fairly apportioned among the classes of users in accordance with a suitable measure of their use. This is easy to generalize but difficult to apply. First is the problem of measuring the costs to be placed upon the users, especially the determination of annual costs: what rates of interest and amortization to be used and whether and to what extent payment in lieu of taxes should be employed.

There is one thing on which we can all be in agreement today: the indispensability of a sound transportation system to the economic and military well-being of the nation. The emergency requirements of the war and the manner in which they were met—through the efforts of the railroads, the shipbuilding industry and merchant fleet, the motor carriers, the air carriers, other water carriers, and the new pipe-line network—re-emphasizes the importance of transportation for national defense. The success which attended these efforts was fortunate enough to overcome all obstacles. However, in our attempt to redesign our regulatory and promotional standards for a sound transportation system, it seems imperative to keep in mind the need of transportation planning for national defense.

The prospect that another war would strike without warning and that tre-

mendous destruction would be suffered by our country—and particularly our transportation system—makes it abundantly clear that our great success in the movement of goods and personnel which contributed so much to victory cannot be relied upon in the future. Any deviation from economic principles based on requirements of national security and federally administered or "infant-industry" promoted should be seriously considered, rigidly tested, and constantly reviewed.

Promotional functions, other than public aid or subsidies, are becoming increasingly important. One of these is the continued loss of railway passenger traffic. Perhaps we as economists should extend our efforts in new research activities, in conjunction with the railroads, to determine, if possible, the reason for the decline in passenger traffic. Relieving the carriers of the obligation of providing service in the unremunerative areas, while extending temporary financial relief, is not solving the problem. More passenger traffic is needed, not less. All of the responsibility for maintaining adequate volume of passenger traffic should not necessarily rest with the carriers. Society itself—the community with its various organizations, political and economic—should perhaps shoulder part of the responsibility. And this financial responsibility may have to be met with more, not less, public aid.

Dr. Dearing stated that the underlying purpose of the regulation of transprotation today is to control competition. If we have moved to this high degree of competition, then the question might be asked, why have regulation? A suggested theme for a future transportation program would be a theoretical analysis of the degree of monopoly and competition existing or that should exist in our transportation system.

AMERICAN ECONOMIC ASSOCIATION

# PROCEEDINGS OF THE SIXTY-SIXTH ANNUAL MEETING

WASHINGTON, D.C.
DECEMBER 28-30, 1953

# PROCEEDINGS OF THE AMERICAN ECONOMIC ASSOCIATION

## ANNUAL BUSINESS MEETING, DECEMBER 30, 1953
## HOTEL STATLER, WASHINGTON, D.C.

The Sixty-sixth Annual Business Meeting of the Asociation was held in the Congressional Room, Hotel Statler, December 30, 1953. The meeting was called to order at 5:00 P.M. by President Calvin B. Hoover. About 150-175 attended.

In his introductory remarks, President Hoover said that his service in office this past year was a pleasant and gratifying experience and that he considered it a privilege to work with such a capable and stimulating group of collaborators.

The minutes of the business meeting of December 28, 1952, were approved and the actions of the Executive Committee and the reports of the Association's officers published in the "Proceedings" were ratified and approved by formal vote.

A review of the year's activities, financial operations, investment holdings, and present status of the Association's assets, liabilities, and surplus was presented by the Secretary-Treasurer, James Washington Bell, and his report was accepted. A detailed record is given in the reports of the Secretary, the Treasurer, the Finance Committee, and of the Auditor.

The Managing Editor of the *American Economic Review*, Bernard F. Haley, described the functioning of the Editorial Office, the activities of the Editorial Board, and gave a brief summary of the size and contents of the *Review*. He referred to the useful service rendered by a panel of advisers which he called upon to supplement the work of the Editorial Board in order to even out the increasing load of editorial work which has to be done.

As in previous years, brief descriptions of the work of selected committees were presented—this time the operations of the *Ad Hoc* Committee on Freedom of Teaching, Research, and Publications in Economics, of which Clair Wilcox is Chairman (Mabel Newcomer reading the report), and of the *Ad Hoc* Committee on Public Issues, Dexter M. Keezer, Chairman (the summary of which was read by C. B. Hoover). Reference was also made to the round table sessions on graduate education in economics and on economics in teacher education, abstracts of which will be published in the *Papers and Proceedings*. Reports of officers, committees, and council representatives are printed below as follows: Reports of the Secretary (page 699); Treasurer (page 714); Finance Committee (page 718); Auditor (page 721); Managing Editor (page 727); of the Committee on Research and Publications, John Perry Miller, Chairman (page 731); of the *Ad Hoc* Committee on Freedom of Teaching, Research, and Publication in Economics, Clair Wilcox, Chairman (page 733); of the *Ad Hoc* Committee on Public Issues, Dexter M. Keezer, Chairman (page 738); Committee on Economics in Teacher Education, Ben W. Lewis, Chairman (page 740); and our representatives to the Social Science Research Council (page

745), the American Council of Learned Societies (page 742), and the National Bureau of Economic Research (page 748).

The Secretary reported that a breakfast meeting of the Conference of Secretaries of the Allied Social Science Associations had been held at which session plans for future meetings were discussed. Our present commitments are as follows: Next year we go to Detroit, Hotel Statler; 1955, joint meeting at New York City, Commodore Hotel will be our headquarters; 1956 and 1957 not yet determined; 1958, joint meeting, Chicago, Palmer House will be our headquarters. The Secretary also reported that the luncheon session of editors of the social science journals was repeated this year and was acclaimed so successful that it will probably be continued in subsequent years.

The report of the Committee on Elections and the certification of the election of new officers for the year 1954 were presented by the Secretary, as follows:

In accordance with the bylaws on election procedure, I hereby certify the results of the recent balloting and present the reports of the Nominating Committee and of the Committee on Elections.

The Nominating Committee, consisting of John H. Williams, Harvard University, Chairman, M. M. Bober, Lawrence College, Edward S. Shaw, Stanford University, George W. Stocking, Vanderbilt University, George W. Taylor, University of Pennsylvania, and Willard L. Thorp, Amherst College, presented to the Secretary the list of nominees for the respective offices:

For President
Simon Kuznets

| For Vice-Presidents | For Executive Committee |
|---|---|
| Roy Blough | Moses Abramovitz |
| William J. Fellner | Norman S. Buchanan |
| Jacob Marschak | Evsey D. Domar |
| Arthur Smithies | George J. Stigler |

The Committee on Elections (Carroll R. Daugherty, Northwestern University, Chairman, Paul C. Cohen, Stein, Roe & Farnham, and James Washington Bell, Northwestern University) prepared biographical sketches of the candidates and ballots were distributed early in November. The canvass of ballots was made on December 12, 1953, and the results were filed with the Secretary.

From the report of the Committee on Elections, I have the following information:

| | |
|---|---|
| Number of envelopes without names for identification | 40 |
| Number received too late | 75 |
| Number of defective ballots | |
| Number of legal ballots | 2,576 |
| Number of returns from mail ballot | 2,691 |

On the basis of the canvass of the votes cast, I certify that the following persons have been duly elected to the respective offices:

President (for a term of one year)
Simon Kuznets
Vice-Presidents (for a term of one year)
Roy Blough
Arthur Smithies
Members of the Executive Committee (for a term of three years)
Norman S. Buchanan
George J. Stigler

After the results of the election were announced, retiring President Hoover presented President-elect Simon Kuznets, who responded with a brief and felicitous expression of appreciation. The honor of this office, he said, carries with it a responsibility which cannot be lightly assumed, but he accepted it with

confidence and with the assurance that he could draw freely upon his able associates and upon the rich resources of the Association in continuing the healthy progress made by his predecessors.

The lateness of the hour prevented discussion of new business from the floor but mention was made of petitions received by officers of the Association from various institutions in the country concerning the status of the profession. This problem is not a new one but World War II conditions did revive interest in it and present uncertainties have prompted some of our members to request action by the Association. It is a matter of concern to the officers of the Association and it will receive serious consideration.

Two memorials were presented—one occasioned by the death of a fellow worker, Donald H. Wallace, our representative on the National Bureau of Economic Research, read by Eveline M. Burns, and the other Eli F. Heckscher, a foreign honorary member, well known to many of us, read by B. F. Haley. These tributes are published as an addendum to these minutes.

President Kuznets called for the final order of business, which was the reading of the report of the Resolutions Committee. The resolutions, which were read by Paul Studenski, were unanimously approved. They read as follows:

The Association is deeply indebted to President Calvin B. Hoover, who bore the major responsibility for the preparation of the program of this meeting, and to the members of the Executive Committee and all others who so ably assisted him in this difficult and time-consuming task.

The Association expresses its gratitude to Ralph A. Young and Guy E. Noyes, Chairman and Vice Chairman, respectively, of the Local Arrangements Committee, and to their several associates on this Committee for their untiring work in attending to the innumerable technical and practical matters associated with the holding of a large gathering. Special recognition is given also to the various federal agencies, local civic organizations, and the local universities, particularly the Washington Board of Trade and the George Washington and American Universities, for their splendid co-operation in the arrangements for these sessions. The Association is indebted to the personnel of the Statler Hotel for making the delegates and visitors to the meetings comfortable; and to the press of Washington, D.C., for their adequate reporting of the proceedings.

Acknowledgment is also made for the co-operation of the other nine professional organizations simultaneously meeting in this city, in the development of an effective and coordinated joint program; and to Ida C. Merriam for editing the consolidated printed program.

Finally, the Association extends its sincere thanks to its able Secretary, James Washington Bell, and to his staff for their continued and efficient contribution to the arrangement of the annual meetings over these many years.

Clarence Heer, *Chairman*
Paul Studenski
Edwin E. Witte

The meeting was adjourned at 6:00 P.M.

JAMES WASHINGTON BELL, *Secretary*

## IN MEMORIAM

### Donald Holmes Wallace

### 1903-53

The Executive Committee records its sense of the great loss sustained by the economic profession in the untimely death of Donald H. Wallace, Professor of Economics at Princeton University. Well known throughout the profession for his pathbreaking study of market control in the aluminum industry and for his outstanding services to the government during and after World War II on the price control and stabilization programs, he was at the time of his death Director of the Graduate Program of the Woodrow Wilson School of Public and International Affairs. Donald Wallace had an unusually wide and generous conception of the functions and public responsibilities of the economist and a warm friendliness and willingness to subordinate his own interests for the benefit of others. These qualities made him outstandingly effective as a member of a variety of nonprofessional economic organizations and a stimulating and beloved teacher and administrator.

We, his colleagues on the Executive Committee, are gratefully aware of his many contributions to the work of the Association. As Vice-President in 1951, Chairman of the Nominating Committee in 1952, a member, and later Chairman, of the Committee on Public Issues and, since 1945, the Association's representative on the National Bureau of Economic Research, he worked tirelessly to further the purposes of the Association and to bring the findings of economics to bear upon the wider issues of public policy. We shall not easily replace Donald Wallace's unique combination of qualities, as scholar, teacher, administrator, public servant and lovable human being.

Eveline M. Burns

## IN MEMORIAM

### Eli Filip Heckscher

### 1879-1952

Eli F. Heckscher died in Stockholm, Sweden, on December 22, 1952. For many years he had been recognized as Sweden's greatest economic historian, and since the publication of his work on mercantilism in the early thirties, he was known throughout the Western world as one of the leading specialists in economic history.

Born in Stockholm on November 24, 1879, Eli Heckscher graduated from one of the most progressive schools in Sweden at the end of the last century and entered Upsala University, where he studied economics and history. In 1907 he earned his doctor's degree with a dissertation on the significance of the railroads for Swedish economic development, an investigation covering some fifty years of recent Swedish economic history. Two years later, in 1909, he was appointed professor of economics and statistics at the Stockholm School of Economics (Handelshögskolan).

This school was founded in the year of Heckscher's appointment; he was one of its first professors and took a profound interest in its organization and the planning of its activities. His teaching responsibilities, together with work on a number of government commissions during the first World War, made great demands on his time and energies, the government work requiring him also to concentrate almost entirely on economic theory and its application to current problems. Not until 1918 did he find time to publish a work that was a synthesis of research in his two academic fields, economics and history: *The Continental System: An Economic Interpretation* (published in English in 1922). In 1929, Heckscher's chair at the Stockholm School of Economics was exchanged for a research professorship in economic history. Being free from teaching responsibilities, he could, from that time on, concentrate on what had always been his main field of interest.

The first work published under these new conditions was *Mercantilism,* which appeared in Swedish in 1931 and was translated into German (1932), English (1935), Italian (1936), and Spanish (1943). It was the first and is still the only existing comprehensive work on its subject, furnishing an economic interpretation of what was not only an uncommonly uniform and widespread conception of economic life but also a theory of economic policy and social organization. An unusually wide orientation in British and French mercantilist literature, an extraordinary command of this vast material, and a consistent approach made this book an international standard work. In spite of the changes in the evaluation of mercantilist economic policy which may be indicated by Keynesian economic theory and the experiences of present-day public planning, Heckscher's *Mercantilism* is of the greatest value even today. During the last few years of his life, Heckscher prepared a revised edition, which was published in Swedish in 1953, and will be published in English in 1954. Reviews of the older editions, comments, and new contributions to the literature of the subject were taken into account in this revision. Special attention was paid to the comments which Professor Viner had made concerning Heckscher's emphasis on the increase of the power of the state as the main objective of mercantilist policy. Viner's discussion caused Heckscher to modify his views on this point to a considerable extent. But except for these modifications and for a number of amendments and amplifications, the work has remained basically the same. Heckscher saw no valid reasons for changing his general conception of mercantilism, and did not accept the new evaluation of this system of economic organization that was more or less tentatively launched by Keynes in his *General Theory*. The new

edition contains a chapter on "Lord Keynes and Mercantilism," presenting Heckscher's opinions on this topic.

After the publication of *Mercantilism,* Heckscher concentrated almost entirely on Swedish economic history. Until some twenty years ago, very little work had been done in this field. Very little was known of the interconnections between economic, social, and political factors in Swedish history. The task he set himself—to publish a comprehensive history of Swedish economic life since the end of the Middle Ages—was one of enormous dimensions whose result could be expected to influence the interpretation of Swedish history to a very great extent.

The two first volumes of Heckscher's great work, *Sveriges ekonomiska historia från Gustav Vasa* ("The Economic History of Sweden from the Time of Gustavus Vasa"), were published in 1935 and 1936, and cover the period from 1520 to 1720. It took him nearly fifteen years to finish the second part, two volumes published in 1950 and covering the ninety-five years from 1720 to 1815. Heckscher's approach could be applied effectively only to numerical data; to a very great extent he was forced to work out statistics and statistical series based on existing sources which themselves had to be selected from an enormous amount of available material. He had to evaluate these statistics, to interpret them, and to correlate them with sources of other kinds. He did this with an almost unparalleled energy, ingenuity, and singleness of purpose. There emerged a comprehensive synthesis of pre-industrial economic life to which there is no parallel in the literature of any other European country.

Heckscher's *Economic History of Sweden* is probably the best work he ever produced, and it has already exerted a profound influence on the interpretation of Swedish history and on the teaching of history. Mostly thanks to his influence, based on the quality of his work, the depth and breadth of his scholarship, and his impressive personality, economic history has been introduced as an academic subject in all Swedish universities. It has also come to be recognized and accepted by most Swedish historians as a field of research and study equally as important and valuable as political history of the traditional kind. The work carried on in Swedish as in other Scandinavian universities has been profoundly influenced by Heckscher's methodological principles. His own pioneer work has created a general awareness even among the political historians of the possible importance of economic relationships in historical development.

E. F. Söderlund

## REPORT OF THE SECRETARY FOR THE YEAR 1953

In order to record official acts and activities of the Association during the year, this report first gives the minutes of the Executive Committee meetings and then a summary of the year's operations, with comments and interpretations.

### Minutes of Executive Committee Meetings

1. Minutes of the spring meeting of the 1953 Executive Committee, April 3-4, 1953 (for minutes of the first meeting, see *Papers and Proceedings*, May, 1953, pages 561-565):

The *second meeting* of the *1953 Executive Committee* was held April 3-4, 1953, at the Biltmore Hotel, New York City. The meeting was called to order at 10:00 A.M. on Friday and adjourned after luncheon on Saturday. The following were present: President Calvin B. Hoover, Secretary-Treasurer J. W. Bell, K. E. Boulding, E. M. Burns, J. B. Condliffe, P. T. Ellsworth, B. F. Haley, F. H. Knight, L. G. Reynolds, D. M. Wright, and J. H. Williams. Absent were: Gerhard Colm and A. G. Hart. Attending as members of reporting committees were: Gottfried Haberler, H. R. Bowen, and J. P. Miller; and as members of the Nominating Committee: M. M. Bober, E. S. Shaw, G. W. Stocking, and W. L. Thorp (G. W. Taylor was absent). Attending as guests were: A. F. Burns and H. S. Ellis.

1. *President's Remarks* (C. B. Hoover). President Hoover outlined the agenda and described the procedure to be followed in the two-day meeting.

2. *Minutes*. The minutes of the meetings of December 27 and 29, 1952, were reviewed and, with minor corrections, were approved as presented in galley proof.

3. *Report of the Secretary* (J. W. Bell). Although the final report from the Local Arrangements Committee had not yet been received, the Secretary was able to present in substance a financial summary and review of the December meetings. We regularly maintain that it is not our object to make a profit on annual meetings. On the other hand, many of the associations without any financial backlog prompt the local arrangements committees to make every effort to avoid possible loss. As a result, substantial surpluses sometimes occur. There will be a surplus to distribute this year even after refunding a part of the exhibitor fees, as a gesture of good will.

Membership statistics show some increase, but growth is hard to measure at this period of the year.

The *Papers and Proceedings* volume this year will again be a bulky one of about 650 pages, and the Secretary announced the increase in list price from $2.00 to $2.50 to take up some of the increased cost of production.

A summary, consolidated report of the financial results of the "Readings Series" and the *Survey* Volumes I and II was presented.

Current plans are to issue a *Handbook* of names and addresses of our members and subscribers in 1953 and a *Directory* of the "who's who" type in 1955. An up-to-date *Handbook* will somewhat relieve the pressure on the use of our mailing list. The Secretary reported sporadic cases of criticism in connection with the use of our mailing list.

A copy of our complimentary subscription list was circulated and it was VOTED to discontinue this list and to make up a new list of institutions chiefly and of individuals only in those cases where some *quid pro quo* benefits are to be derived. The Secretary was asked to circulate copies of the present complimentary list (authorized by vote in January, 1947), so that members of the Executive Committee can scrutinize the list and compare it with the exchange list (see the 1948 *Directory*).

4. *Reports of the Treasurer and the Finance Committee* (J. W. Bell). The Treasurer reviewed our financial status, reported current cash balances, changes in investments, and the financial outlook of the Association. With the *Handbook* and also the supplement on graduate training in economics as extra publications, this year's publication expense will be abnormally large.

5. *Report of the Managing Editor* (B. F. Haley). The Managing Editor described a

trip to the George Banta Publishing Company plant at Menasha which he and the secretarial staff took after the Christmas meetings. The results of the visit are already beginning to prove fruitful.

A change in the procedure of naming members of the Editorial Board "with advice and consent of the Executive Committee" was recommended by the Managing Editor and it was decided to consider replacements for the following year at the April meetings. A slate of names was accordingly presented for the consideration of the Committee, but final action was postponed to the December meeting.

The March number of the *Review* contains a list of emeritus professors. Only nine names are reported in this issue, but the list may increase in size when more people learn about it. An increase in the number of articles and communications coming to the Editor's desk since January was reported. Instead of an average of sixteen to nineteen per month, manuscripts received have run from twenty-two to thirty-nine during the past three months.

The Managing Editor's Office is experimenting with some changes in classification and suggests the addition of "Economic Development" to Group 2, with "Economic History" and "National Economies." The Editor also reported that the names on the Ph.D. list will be included only twice instead of the previous three times.

6. *Reports of Standing and Special Committees:*

6a) *Research and Publications* (J. P. Miller). The only specific piece of business before the newly constituted Committee was the proposal on financial support for small research grants. This proposal, appropriately directed to the Ford Foundation for the consideration of their committee of economists, was discussed at length. It was VOTED that the President by authorized to appoint a liaison or advisory committee of three, without executive power, to be available for discussions of the proposal with the Ford Foundation should the Foundation desire and that this committee be asked to bring back recommendations to the Executive Committee for its consideration at the December meeting. It was suggested that President Hoover write a covering letter, expressing the interest of our Association in such a proposal and our desire to work with the representatives of the Ford Foundation toward the ends defined in the proposal.

A letter from Arthur Smithies was read, describing the present status of progress made on Volume VII, *Fiscal Policy*, of the "Readings Series."

Progress was reported on the Walras translation. Professor Jaffe writes that some sixty galleys are done out of about a hundred and that the volume should be off the press for spring announcement, 1954.

Kenneth Boulding was asked to describe to the Research and Publications Committee his proposal of a compilation of a bibliography on theory. He summarized the results of a questionnaire that he had sent out to a few individuals interested in the project. No action was taken.

6b) *Economics in Teacher Education* (B. W. Lewis). The Secretary gave an account of the recent meeting of the Commission on Economics in Teacher Education held in New York. This meeting was attended by all three members of our Committee on Economics in Teacher Education, and a meeting of this Committee was held during a luncheon hour at which two recommendations were agreed upon. The Secretary read a report from the Committee, incorporating these recommendations, which involved ways and means of learning who among our membership were interested in this field of activity and promoting a round table on the subject at the December meetings. It was also suggested that some publicity might be given in the *Review*. The report was accepted and the proposals approved.

6c) *Public Issues (Ad Hoc)* (D. H. Wallace). A letter was read from D. H. Wallace, describing the status of the Committee, which, because of ad interim shifts, had not yet been fully constituted. A report from this Committee will be expected at the December meeting.

6d) *International Co-operation; the I.E.A.* (Gottfried Haberler). Professor Haberler gave an oral report of the activities of the I.E.A. and of the correspondence he had had with representatives of the Ford Foundation. President Hoover was authorized to write to the Ford Foundation that the Association renews its interest and support of this application for financial assistance to enable the I.E.A. to carry on for another three to five years. Professor Haberler announced that the Council was contemplating the issue of the *International Economic Papers*, now appearing annually, on a semiannual basis, but the costs may prove to be prohibitive. Numbers 1 and 2 (3,500 and 3,000 copies, respectively) will cost 3,000 pounds. Professor Haberler indicated that there is now a $200 limit to supplement travel and local expenses of representatives.

A list of names was suggested of members who plan to be in Europe this summer, from which the two representatives might be selected to fill present vacancies.

6*e*) *Honors and Awards* (N. S. Buchanan). A telegram from N. S. Buchanan indicated that the Committee was unable to submit final ballots for the Clark award and that further balloting appears to be necessary. It was resolved that the following procedure govern the selection for this year: (1) that the Committee on Honors and Awards submit a panel of three nominees, together with ballots of its members, indicating first, second, and third choices; (2) that the results of this ballot, together with vitae of the nominees recommended, be sent to the members of the Executive Committee, who in turn will submit their ballots; and (3) that the total count determine the result. In case the result proves doubtful as a true expression of the voters, the matter will be carried to the December meeting.

6*f*) *Foreign Honorary Members* (W. W. Leontief). The Committee has just recently been reconstituted and new instructions will have to be supplied them before progress can be expected.

6*g*) *Freedom of Teaching, Research, and Publication in Economics* (*Ad Hoc*). The status of this Committee not having changed since the December meeting, it was VOTED that the Committee be reconstituted, i.e., Clair Wilcox, Chairman, Paul J. O'Leary, and Mabel Newcomer, and that the President, Secretary, and Chairman be authorized to provide expense money for a meeting, if needed. It was suggested that this Committee might be interested in conferring with the corresponding committee of the Ford Foundation and join their efforts in the common cause.

6*h*) *Graduate Training in Economics (Ad Hoc)* (H. R. Bowen). Professor Bowen presented his report in person, which report was accepted. It was VOTED to publish the report on graduate training in economics as a supplement to the *Review*. In doing this, we followed a precedent, having published the Horace Taylor report as a supplement. The provision in a previous minute for the preparation of a separate article, summarizing the findings and presenting the conclusions, was waived on the grounds that such material would more appropriately appear in the volume and that there would be no point in reaching the same audience in a separate article.

6*i*) *Nominating* (J. H. Williams). Upon completion of their slate of nominees, the Nominating Committee met with the Executive Committee as an electoral college and agreed upon the nominee for president for the year 1954. The acceptance of this nominee was later obtained. Since the term of one of our representatives to the S.S.R.C. expires this year, to fill this vacancy, D. Gale Johnson was selected. It was VOTED to publish the complete slate of nominees of officers for 1954 in the June number of the *American Economic Review*.

7. *Report of Council Representatives*. These reports are published in the *Proceedings* and, except for a more up-to-date account from our representative on the N.B.E.R. and a brief verbal discussion of the status of the A.C.L.S., nothing new was added.

8. *Annual Meetings:*

8*a*) It was VOTED to approve December 28-30, 1953, as official dates of this year's meeting.

8*b*) It was VOTED to select Chicago as our place of meeting for 1958. After some discussion of the years 1956 and 1957, the matter was laid on the table.

8*c*) Ways and means of giving some support or co-sponsorship to the 1954 meetings of the Western Economic Association and the A.A.A.S. were discussed, but except for the expression of our willingness to lend our good offices, nothing was done.

8*d*) The balance of the meeting was devoted to the discussion of the 1953 program.

9. *New Business*. Professor Arthur F. Burns discussed the present status of the President's Council of Economic Advisers and the relation of the profession to this public body.

## 2. Minutes of the Christmas meetings held in Washington, D.C., December 28 and 30, 1953:

The *third meeting* of the *1953 Executive Committee* was called to order at 10:00 A.M. at Hotel Statler, Washington, D.C., December 28, 1953, C. B. Hoover presiding. Others present were: J. W. Bell, K. E. Boulding, E. M. Burns, Gerhard Colm, P. T. Ellsworth, B. F. Haley, A. G. Hart, F. H. Knight, L. G. Reynolds, and J. H. Williams. Also present, as guests, were Roy Blough, D. M. Keezer, Simon Kuznets, Gottfried Haberler, J. P. Miller, T. W. Schultz, I. L. Sharfman, Arthur Smithies, and G. J. Stigler. Absent were: J. B. Condliffe and D. M. Wright.

The *first meeting* of the *1954 Executive Committee* was held on December 30, at

6:00 P.M., with Simon Kuznets presiding. Others present were: J. W. Bell, Roy Blough, Gerhard Colm, B. F. Haley, C. B. Hoover, L. G. Reynolds, Arthur Smithies, G. J. Stigler, and J. H. Williams. Attending, as guests, were: E. L. Bogart, E. M. Burns, J. M. Clark, M. A. Copeland, P. T. Homan, F. H. Knight, B. W. Lewis, E. G. Nourse, G. E. Noyes, and R. A. Young. Absent were: K. E. Boulding, N. S. Buchanan, and D. M. Wright.

The account of the proceedings given below does not follow the chronological order of business but treats the sequence of items as they were listed on the agenda.

1. *President's Remarks* (C. B. Hoover). After the meeting was called to order, the order of business was described, changes being made to take up first those items which represented business that had to be finished by year-end 1953, postponing others as being more appropriate for the consideration of the 1954 Executive Committee.

2. *Minutes.* The minutes of the April, 1953, meeting held at the Biltmore Hotel in New York City were approved, with a few minor corrections, in the form in which they had been distributed. The suggestion made last year that the minutes of the spring meeting be printed in the June number of the *American Economic Review* did not prove feasible and hence was not acted upon.

3 and 4. *Reports of the Secretary-Treasurer, the Finance Committee, and the Auditor* (J. W. Bell). Excerpts from the Secretary's report were presented which summarized the chief activities of the year; i.e., the annual meeting, membership, publications, progress reports of committees, special projects, and reports of council representatives.

Summary statements of income-expense and balance sheet accounts were distributed and items were described. Changes in our investment holdings were explained and our investment policy discussed. Details of financial and investment operations may be found in the reports of the Treasurer, the Finance Committee, and the Auditor.

The incumbents of the Finance Committee were re-elected for another term, as was the auditor, David Himmelblau & Company. The vote authorized the Secretary to extend to these members an expression of thanks and confidence.

5. *Report of the Managing Editor* (B. F. Haley). Excerpts were read from the report of the Managing Editor (see below) and the size and cost of the *Review* were described. The Editor requested approval of a policy with regard to the publication of memorials and it was VOTED that as a general rule memorials to past presidents be of brief scope, that is, a page or so, but that such memorials are not interpreted to mean articles or communications involving the analysis of authors' views; in other words, one-page memorials "exclusive of review analyses."

A statement of policy with regard to exchanges was also requested, and it was VOTED (1) that no exchanges be made except publications which prove useful to the Editor or which contain articles and reviews which the Editor wants to list in the *American Economic Review* and (2) that some exchanges be authorized involving institutions who might be put on our complimentary list to receive free subscriptions (in other words, they become an exchange so that we can get something in return for our publications). In connection with our complimentary list, both the Editor and the Secretary would appreciate receiving suggestions from Executive Committee members and others for their guidance in the disposition of free subscriptions. It is our wish that this list be continuously scrutinized.

A slate was presented of candidates to succeed Milton Friedman and Lloyd G. Reynolds, whose terms on the Editorial Board expired, and with the approval of the Executive Committee, George H. Hildebrand, of the University of California at Los Angeles, and Gardner Ackley, of the University of Michigan, were selected for three-year terms.

A budget of $37,850 (see report) was approved by formal vote.

6. *Reports of Standing and Special Committees.*

6*a*) *Committee on Research and Publications* (J. P. Miller). Two meetings of this Committee have been held during the year—one in New York City in November and a second during the annual meetings. Professor Miller reported that at the November meeting the Committee reviewed the research and publication activities of the Association and considered the replies received from a questionnaire, soliciting suggestions for further Committee activity. Titles for new volumes of readings were considered (e.g., on economic growth, resources and population) and a proposed handbook or manual on research methodology was considered. The handbook idea originated from economists who were interested in empirical techniques in agricultural research and the proposal involved adding two economists to the group and promoting the project under A.E.A. and S.S.R.C. co-sponsorship. Professor Miller recommended that our Association authorize the appointment of a joint committee to prepare a prospectus and, if the project is approved, to raise money in order to finance the project. It was VOTED to accept the report and postpone consideration of the proposal until the April meeting.

Further activities of the Committee involving exploring the possibilities of initiating a new reprint series, e.g., J. N. Keynes's *Methods,* continuing the promotion of small research grants in co-operation with the Ford Foundation (see *ad hoc* committee, J. P. Miller, J. H. Williams, and J. B. Condliffe, who were to confer with the committee of the Ford Foundation). Arthur Smithies reported on the status of Volume VII, *Fiscal Policy.* The table of contents of this volume has been prepared and further explorations are being made either to include articles on monetary policy with fiscal policy and to leave way for a future volume on public finance or to embody the latter subject with the present one.

The financial results and budget status of the readings and *Survey* publication series will, it is hoped, be available in up-to-date shape for presentation at the April meeting.

The term of S. E. Leland expires year-end 1953. A successor should be appointed at the April meeting.

6*b*) *Ad Hoc Committee on Economics in Teacher Education* (B. W. Lewis). The minute of the April, 1953, meeting on this subject was reviewed; i.e., compiling a list of members interested in teacher education, arranging a round table at the annual meeting, and providing publicity of this activity in the *American Economic Review.* Professor Lewis described the work of the Commission on Economics in Teacher Education, which was established last February and met again at Riverdale, New York, in August and with which Commission our *ad hoc* committee acts in liaison. He told about a conference held under the auspices of the A.C.L.S. on standards of teacher training and recruitment which was held in Washington, D.C., September 25-26. This conference is concerned with association responsibilities and activities in connection with American education and is a related subject but not the direct concern of our Committee on Economics in Teacher Education. Professor Lewis explained that the so-called "Pollock Resolution" adopted at the Washington meeting requires no specific action on our part at this time, since we have already demonstrated our concern about economics in teacher education and about economic education in all of its aspects. A brief, three-page report on "Activities of the American Economic Association in Promoting Economic Education" was prepared and presented by the Secretary at this meeting.

6*c*) *Ad Hoc Committee on Public Issues* (D. M. Keezer). A written report of this Committee, submitted by Dr. Keezer, recommended in effect that they "could find no case for reconstituting a committee on public issues." The report was accepted, with thanks to the members of the Committee for their careful, conscientious consideration of this problem. A slight overdraft in the Committee's appropriation for expenses was ratified and the balance of unexpended funds of the previous committee, which was dissolved April, 1952, was ordered written off and the amount thrown back in to the treasury, the amount involved being $783.66.

6*d*) *Committee on International Co-operation; the I.E.A.* (Gottfried Haberler). A written report will be submitted, summarizing the financial status of the I.E.A., the proceedings of the second council meeting, the 1953 round table on economic growth (which was not as successful as the earlier conferences), the publication of the *International Economic Papers* (sales are not satisfactory), and of the volume on *Teaching of Economics* (originating from the conference held at Talloires in 1951), published under UNESCO auspices and underwritten by the R.E.S. and the A.E.A. The 1954 conference will be on collective bargaining, place not yet announced, and it is proposed that the 1956 conference be open to all individual members of member associations. This may be the last UNESCO-sponsored meeting. One item not mentioned at this meeting but which should be taken up at the April meeting is our method of selecting representatives to the I.E.A. conferences. Our present method is to appoint these members for six-year terms. Present representatives and date when term expires are: Gottfried Haberler and Howard S. Ellis, 1955; Milton Friedman and Max F. Millikan, 1958. Since it is often necessary to make appointments from members who are likely to be in Europe at the time of the conferences, this method of constituting our panel of representatives may prove impracticable.

6*e*) *Committee on Honors and Awards* (N. S. Buchanan). The report of this Committee was not acted upon because of the impracticability of bringing its members together in order to resolve differences. It was VOTED, therefore, not to make a J. B. Clark award this year.

6*f*) *Committee on Foreign Honorary Members* (W. W. Leontief). This Committee has been reconstituted but no report is submitted at this time.

6*g*) *Ad Hoc Committee on Freedom of Teaching, Research, and Publication in Economics* (Clair Wilcox). This report was submitted and it was VOTED to accept it with thanks to the members of the Committee for the careful and painstaking consideration given this difficult problem and for the able report which is printed below. The report

recommends that a standing committee be appointed and that an annual report be prepared on the status of the profession. The duties of this Committee having been fulfilled, it was ordered discharged.

6*h*) *Ad Hoc Committee on Graduate Training in Economics* (H. R. Bowen). A report of this Committee was accepted at the April meeting, 1953, with the assumption that the Committee would be dissolved. Now that the report is published and the project completed, it was VOTED to wind up financial arrangements with the Rockefeller Foundation and to express to them our thanks for their co-operation and to congratulate the director of the project, Howard R. Bowen, for his successful accomplishment. A financial accounting was presented by the Treasurer.

6*i*) *Nominating Committee* (M. A. Copeland). A panel of names was presented by President Kuznets, who had, in conference with Professor Copeland, made a thorough review of the members of past nominating committees, past nominees and officers, suggestions from members, ballot slips, and other materials. With advice and tacit consent of the members of the Executive Committee, a committee was constituted and the chairman was instructed to get acceptances of appointees.

7. *Reports from Council Representatives.*

7*a*) *A.C.L.S.* (F. H. Knight). Professor Bell reported on the meeting of the Conference of Secretaries in January, 1953, and also the joint conference with the Council in Washington, D.C., September, 1953, and presented suggested items for the program of the Secretarial Conference meeting of January, 1954.

7*b*) *S.S.R.C.* (J. P. Miller). The report was not presented but is published below.

7*c*) *N.B.E.R.* Excerpts from a report by the Executive Director of the N.B.E.R. are published below. J. H. Williams has been appointed to succeed Donald H. Wallace for the unexpired term ending in February, 1955.

8. *Annual Meetings.* A review of the time and place of future meetings confirms the following arrangements: Detroit, Hotel Statler, 1954; New York City, Commodore Hotel, 1955; 1956 and 1957 open; Chicago, 1958, Palmer House. Professor Edward L. Cushman, of Wayne University, has accepted the appointment as Chairman of the Committee on Local Arrangements for the Detroit meetings, December 28-30, 1954.

At a breakfast meeting of the Conference of Secretaries of the Allied Social Science Associations, arrangements for future meetings were discussed, such as changing the date of meetings from the Christmas period to September or late January, collaborating more closely with Section K of the A.A.A.S., holding more than one meeting per annum to serve the interests of the diverse character of the membership of some of the associations, and co-operating or co-sponsoring regional meetings.

9. *Unfinished and New Business.*

9*a*) The Secretary reported that sporadic requests continue to be received from members and from foreign libraries and institutions soliciting free subscriptions to our publications, books and dollars from our members, to rebuild depleted libraries.

9*b*) A number of petitions have been received, asking the Association to assume some responsibility in setting up professional standards for economists, and it was suggested that a committee be set up to study the problems and objectives referred to in the petition on the status of the profession and to report findings and recommendations but action on this proposal was deferred until the April meeting. A list of suggestions for further A.E.A. activities will be presented at this time.

9*c*) On recommendation of Professors Haley and Bell, an increase in salary in the amount of $250.00 per annum was VOTED for Miss Gertrude Tait and Miss Doris Merriam.

9*d*) The time of the spring meeting of the Executive Committee was set for April 2-3 and the place was left for determination by the President and the Secretary.

9*e*) Some members expressed interest in the composition of the Fulbright screening committee, which is not a committee of the Association but consists of the following members: B. W. Lewis, Chairman, J. W. Bell, T. H. Carroll, J. H. Cover, R. A. Lester, and C. F. Remer.

9*f*) The balance of the meeting was devoted to ways and means of doing some preliminary work on the 1954 program during Professor Kuznets' absence in Europe from January to March. Some understandings were reached with respect to delegation and assumption of powers to act.

The meeting was adjourned at 9:30 P.M.

## Activities and Operations

This has been another year of steady growth and sound accomplishments all along the several lines of our main endeavors; namely, annual meetings, publications, committee activities, and co-operative relationships with allied associations, both here and abroad, and with the councils.

The meetings in Chicago were well attended (for statistics, see 1953 *Handbook,* page 173), accommodations were ample, and with excellent management by a capable local arrangements committee, all operations were smoothly conducted. After bills were paid, a small surplus remained to be distributed to the participating associations. The volume of *Papers and Proceedings* presents the record of another year of contemporary economic developments. Even before the completion of this volume, the program for the 1954 meetings got away to an early start.

The Managing Editor of the *American Economic Review* reported a bumper crop of manuscripts for the four substantial volumes of our quarterly journal, and two supplements were issued to our members without additional charge: (1) a report, *Graduate Education in Economics,* distributed with the September number of the *Review,* and (2) a *Handbook* of names and addresses with the December number. In all, our members have received for their $6.00 dues publications amounting to $13.00 at list prices.

The operations of some of our standing committees have come to an end, e.g., Graduate Training in Economics, Academic Freedom, and Public Issues, and several *ad hoc* committees have been established, two for the purposes of reviewing need of further work along former lines, i.e., Public Issues, Freedom of Teaching, Research, and Publication in Economics, and one, Economics in Teacher Education, for developing a new facet of our interest in the whole field of economic education—this time in the sector of secondary school education, or, more specifically, how to teach teachers to teach economics.

Our co-operation with the I.E.A. continues in the form of joint participation in international conferences. One of these conferences has given rise to a volume on teaching economics, which will soon be off the press and which is being co-sponsored by UNESCO, the Royal Economic Society, and the A.E.A. It will be distributed at special rates to our members. We continued to co-operate actively in maintaining cordial and effective working relations with allied associations in the social science group and to supply our share of constructive help and leadership in the councils.

Interest in the status of the economics profession has been revived in the form of a number of petitions received from groups of our members in different parts of the country. These petitions request the Association to do something about formalizing the qualifications of "economist." Some efforts have been made in the past to define the economist and what he does, but the difficulties of formulating precise specifications of this branch of the social sciences must be apparent to all. However, the problem is under consideration.

Our activities are described in further detail under appropriate headings below.

*Annual Meetings.* The schedule of future meetings presented in last year's report (see *Papers and Proceedings,* May, 1953, page 564, Minutes of the Executive Committee, and page 566, Report of the Secretary) apparently escaped the attention of many members concerned. After Washington, D.C., in 1953, we go to Detroit in 1954. (A previous decision to go to Toronto was canceled by mail ballot.) In 1955 we are scheduled to meet in New York City, jointly with the other social science associations. No decisions have yet been made for 1956 or 1957. The conference of the allied social science associations secretaries discussed informally where independent meetings for these years might appropriately be held and the item was placed on the agenda for our Executive Committee but action has twice been postponed. The decision has been to hold an all-out joint meeting in Chicago in 1958, with the Palmer House as our headquarters.

Our meeting at the Statler in Washington this year, though separately and independently arranged, contains a number of co-sponsored or joint sessions, chiefly ones with the American Statistical Association (meeting at the Shoreham), the I.R.R.A. (at the Mayflower), the American Finance Association, the Econometric Society, and the American Farm Economic Association. Of the twenty-two sessions scheduled, we will publish in the *Papers and Proceedings* the main and discussion papers of eighteen, a précis of two round tables, and abstracts or reports from the two public utility and transportation sessions. These will make another large volume of perhaps 600-odd pages—about as large as last year's voume. We have had volumes of 500 pages or more since 1942, but only last year did we increase the price of this volume ($2.00 to $2.50) to bring it more closely in line with production costs.

*Membership.* With a membership of about 7,300 and subscriptions of about 2,700, we have this year passed the 10,000 mark. Net gain of 68 members and 119 subscribers, however, is no great cause for gratification. It is indeed a smaller increase than we have experienced for the last several years. (See Exhibit II for breakdown of members and changes during the year and the 1948 *Directory,* pages 314-315, for figures and chart for past years, 1886-1948.) We believe that there are hundreds, perhaps thousands, of formally trained economists who are not but who should be members of the A.E.A. (See Secretary's Report for May, 1951, page 769, and *Papers and Proceedings,* 1953, pages 566-567, and supplement to September A.E.R. on *Graduate Education in Economics,* the so-called "Bowen Report," pages 22-25.) Our growth of members could be stepped up by resorting to methods indicated in last year's report or to a membership drive, but such work would require more clerical help than our office is at present equipped to devote to this purpose. We believe that productive results can be achieved if more of our senior members would follow the practice of advising their younger colleagues to establish a professional relationship as soon as they decide to make economics their major field of interest. Many members do send us annually a list of prospects, with a request for A.E.A. application blanks. This is sound practice.

In order to have on hand a supply of our publications to meet the demand

of new members and subscribers as well as for the sale of odd numbers, we now print an edition of 10,900. When this margin proves inadequate, we advertise in the *A.E.R.* for out-of-print back numbers, buying these from those who do not keep complete files. Members and subscribers who wish to fill gaps in their files or who wish to dispose of copies or sets of our publications may run notices to this effect in the *Review*.

*Geographical Distribution.* No new trends are noticeable in the distribution of our membership or of our subscribers. (See May, 1952, *Papers and Proceedings*, page 720, for brief analysis and references to previous accounts, and the 1953 *Handbook*, pages 180-181, for figures on current list.)

*Publications.* The Association publishes quarterly the *American Economic Review*, an annual *Papers and Proceedings*, an occasional directory or handbook, and a small information booklet for office use.

*American Economic Review.* This year's volume of our journal totaled 986 pages. The edition of 10,900 was published at a cost of $24,292. Details of contents, i.e., articles, communications, reviews, notes, and so forth, and costs and budget, are given in the report of the Managing Editor. Two special supplements were issued: the report on graduate education in economics, prepared by Howard R. Bowen, issued in September, and the 1953 *Handbook*, prepared in the Office of the Secretary, and distributed as a supplement to the December number of the *Review*.

Permission to quote and to reprint materials from the *Review* as well as from the *Papers and Proceedings* has been liberally granted when author's consent is also given whenever it is thought that legitimate purposes were served in making the contents of our publications more generally accessible.

The series of photographs and biographical sketches of past presidents (as well as editors and secretaries), started in 1941, has been kept up and will be continued until the list of such officers is completed. The pictures of current presidents appear (since 1942) in the March issue of the *A.E.R.* along with the presidential address. During the current year, the following have appeared: in March, H. A. Innis; in June, J. M. Clark; in September, A. S. Johnson; and in December, O. M. W. Sprague.

The "Vacancies and Applications" section of the *A.E.R.*, published since 1939, continues to serve a useful purpose. These announcements are printed without charge and together with the employment register conducted at the annual meetings are designed to provide a clearing mechanism for the demand and supply factors of the market for economists. We make no recommendations, nor do we have facilities for keeping up active files of applications or specifications of vacancies throughout the year. As an experiment in improving this service and for enlarging its scope, we have this year co-operated with the U. S. Employment Service, which has agreed to handle an employment register at our annual meeting in Washington.

*Papers and Proceedings.* This volume, issued in May, 1953, contains 612 pages and the printing costs of 10,900 copies amounted to $10,936. These volumes have been large nearly every year for the past decade, and we have given much thought to means of reducing their bulk. An issue in two parts,

to appear in May and in August, was even authorized at one time, but the project was abandoned when it became obvious that this method would not solve the difficulties.

*The 1953 Handbook.* This contains the usual information; i.e., charter and bylaws, alphabetical and geographical lists of members and subscribers with addresses, supplementary information, and statistical tables. However, Exhibit 1 is new. Here we publish for the first time our total exchange list, both domestic and foreign. In the 1948 *Directory* we published only our foreign exchange list. By making these lists public, we hope that they will be carefully scrutinized and appraised and that we will benefit from the suggestions of deletions as well as of additions.

The sixteen-page information booklet, prepared annually, was revised and 800 copies were printed for distribution to officers and to prospective members and others interested in the purposes and activities of the Association.

*Committee Activities.* A roster of members of all standing and special committees is found at the end of this report.

*Committee on Research and Publications* (J. P. Miller, Chairman). Because of the overlapping character of the operations of the Research and of the Publication Committees, the two were consolidated last year and reconstituted to consist of our representatives on the S.S.R.C., the N.B.E.R., and the Secretary, plus three members appointed on rotating terms by the President.

*a*) *Republications or Readings Series.* A consolidated report, showing the financial results and present status of the "Readings Series" and the *Survey* volumes (both Blakiston and Irwin experience), is in the process of preparation but has been delayed because we still lack information from the publishers.

The six volumes of readings have been well received, several have been reprinted, and Volumes I and II have been profitable. We may more than break even on Volumes III to VI and we may also benefit from a share in royalties which have come from foreign sales of readings and *Survey* volumes printed by George Allen & Unwin, Ltd., in London. Volume VII, *Fiscal Policy* (J. K. Butters and Arthur Smithies, co-editors), has been delayed in preparation, but steps are being taken to accelerate progress on this volume, for which there seems to be a pressing demand. The volume on *Enterprise and Secular Change* (F. C. Lane and J. C. Riemersma), co-sponsored with the Economic History Association and issued last December, has not sold as well as we had anticipated. We urge members to examine this excellent volume, believing it justifies a favorable reception. Some thought is being given to the preparation of a Volume VIII, on *Technique of Research Methodology.* As previously indicated, however, the urgency of preparing new volumes by the A.E.A. has perceptibly subsided in recent years. A number of readings volumes in fields contemplated by our committee have appeared and apparently other authors and publishers are now willing to perform this service and the Association's efforts may advisedly be directed along other lines.

*b*) *A Survey of Contemporary Economics.* Volume I (H. S. Ellis, Editor) has been translated into Japanese and into Italian. The latter volume, recently received, is an impressive, beautifully printed and bound book. Vol-

ume II (B. F. Haley, Editor) has also made a place for itself in American economic literature. The sales for the first year have been gratifying. These two volumes have accomplished all that we could reasonably expect of such contributions and their reception presages or augurs well the desirability of preparing sequel volumes when further developments of economic thought and changes and events warrant. They have served as a model, imitated in other disciplines, and have proved a worthy project of a professional learned society.

c) *Translation Series.* At long last the publishers are announcing for spring (1954) publication William Jaffé's annotated translation of Walras' *Elements d'Economie Pure.* This 610-page volume is being printed by George Allen & Unwin, Ltd., and will be distributed by them in the European market under the auspices and co-sponsorship of the Royal Economic Society, and Richard D. Irwin, Inc., will import sheets and bind and distribute the volume to the American market under our auspices. The price will be within the range of the ordinary scholar's budget—thanks to generous allowances by the publisher and real sacrifice of royalties by the author.

The Committee has held two meetings this year and has given consideration to the preparation of a handbook on use and application of empirical techniques in economic research, a report from the liaison advisory committee on small research grants (co-operating with the Ford Foundation), economic bibliographies, and other matters.

*Ad Hoc Committee on Economics in Teacher Education* (B. W. Lewis, Chairman). This Committee, established to co-operate with the Commission on Economics in Teacher Education, recommended in April that ways and means be determined to discover who in the Association membership are interested in the subject of teacher education, that a round table session on this subject be conducted at the annual meeting, and that some publicity be given to the work of this Committee and to the Commission. No survey or questionnaire was made but informal queries disclose a surprising number of economists interested in "teaching teachers what to teach and how to teach economics." There are a number of economists in particular who are engaged in instructing in summer workshops conducted under the auspices of the Commission on Economics in Teacher Education.

A round table session, set up for the December meeting, brings together both educators and economists to discuss the problems of economics in general education on the secondary school level. Related to this subject but not a part of it are the activities of the Conference of Secretaries of the A.C.L.S. (See report of A.C.L.S. below.)

*Ad Hoc Committee on Public Issues* (D. M. Keezer, Chairman). This Committee, appointed to survey the problem of reconstituting a standing committee, was not ready to report at the April meeting. It has since been reconstituted (after the death of D. H. Wallace) and its report, submitted at the December meeting, is found below.

*Committee on International Co-operation; I.E.A.* (Gottfried Haberler, Chairman). A brief oral report was presented at the December meeting, with a fuller review of plans and prospects to come in April.

*Ad Hoc Committee on Graduate Training in Economics* (H. R. Bowen, Chairman). A brief report, winding up this project, was submitted by Professor Bowen. Problems raised in the round table at the annual meeting are reported in the précis or notes on the round table session.

*Nominating Committee* (M. A. Copeland, Chairman). This Committee is being constituted and will be ready to report in April.

*Reports of Council Representatives.* Reports of our representatives to the A.C.L.S. and the S.S.R.C. and abstracts from the Executive Director's N.B.E.R. report are published below.

Related to our Committee on Economics in Teacher Education but not a part of these undertakings are the activities of the A.C.L.S. and the Conference of Secretaries. It was proposed at the last annual meeting of the latter that constituent societies interested in the relationship of their organizations to education should pool their forces in a joint effort. A special conference of the Council and officers of the Conference of Secretaries was held in Washington, September 25-26. Professors B. W. Lewis and J. W. Bell attended. A resolution on standards in teacher training was adopted at this session which is being communicated for the consideration of all constituent societies. A Committee on the Relation of Learned Societies to American Education was also established at this conference for the purpose of implementing investigations in appropriate areas, raising funds, and maintaining continuing liaison with constituent societies.

### *Committees Appointed During the Year*

*Ad Hoc* COMMITTEE ON ECONOMICS IN TEACHER EDUCATION
- Ben W. Lewis, *Chairman*
- Horace Taylor
- Archibald McIsaac

*Ad Hoc* COMMITTEE ON FREEDOM OF TEACHING, RESEARCH, AND PUBLICATION IN ECONOMICS
- Clair Wilcox, *Chairman*
- Mabel Newcomer
- Paul M. O'Leary

COMMITTEE ON LOCAL ARRANGEMENTS
- Ralph A. Young, *Chairman*
- Guy E. Noyes

*Ad Hoc* COMMITTEE ON PUBLIC ISSUES
- Dexter M. Keezer, *Chairman*
- Harold M. Groves
- Edward S. Mason

COMMITTEE ON ELECTIONS
- Carroll R. Daugherty, *Chairman*
- Paul C. Cohen
- James Washington Bell, Ex Officio

FINANCE COMMITTEE
- Roy C. Osgood, *Chairman*
- C. Wells Farnham
- James Washington Bell

NOMINATING COMMITTEE
- John H. Williams, *Chairman*
- George W. Stocking
- Willard L. Thorp
- Edward S. Shaw
- George W. Taylor
- M. M. Bober

*Ad Hoc* COMMITTEE ON GRADUATE TRAINING IN ECONOMICS
- Howard R. Bowen, *Chairman*
- George L. Bach
- Milton Friedman
- I. Leo Sharfman
- Joseph J. Spengler

*Standing Committees and Representatives*

COMMITTEE ON HONORS AND AWARDS
Norman S. Buchanan, *Chairman* (1956)
George L. Bach (1954)
Edward S. Shaw (1954)
Fritz Machlup (1956)
Edward S. Mason (1958)
Joseph J. Spengler (1958)

COMMITTEE ON FOREIGN HONORARY MEMBERS
Wassily W. Leontief, *Chairman*
P. T. Ellsworth
Paul A. Samuelson

COMMITTEE ON RESEARCH AND PUBLICATIONS
John P. Miller, *Chairman* (1955)
Theodore W. Schultz (1953)
Simeon E. Leland (1953)
George W. Stocking (1954)
John H. Williams (1955)
Joseph J. Spengler (1954)
Jacob Marschak (1955)
James Washington Bell

COMMITTEE ON INTERNATIONAL CO-OPERATION
Gottfried Haberler, *Chairman*
Howard S. Ellis
Theodore W. Schultz
James Washington Bell

INTERNATIONAL ECONOMIC ASSOCIATION REPRESENTATIVES
Gottfried Haberler (1955)
Howard S. Ellis (1955)
Milton Friedman (1958)
Max F. Millikan (1958)

SOCIAL SCIENCE RESEARCH COUNCIL REPRESENTATIVES
Theodore W. Schultz (1953)
George W. Stocking (1954)
John P. Miller (1955)

AMERICAN COUNCIL OF LEARNED SOCIETIES REPRESENTATIVE
Frank H. Knight (1954)

NATIONAL BUREAU OF ECONOMIC RESEARCH REPRESENTATIVE
John H. Williams (1955)

*Representatives of the Association on Various Occasions*

CENTENARY CELEBRATION OF MANHATTAN COLLEGE
James J. O'Leary

FOURTH NATIONAL CONFERENCE OF U. S. NATIONAL COMMISSION FOR UNESCO
Richard L. Kozelka
Francis M. Boddy

ANNUAL MEETING OF AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
Charles R. Whittlesey

DEDICATION CEREMONIES AT MARY WASHINGTON COLLEGE
Tipton R. Snavely

INAUGURATION OF UNIVERSITY AND COLLEGE PRESIDENTS:
Logan Wilson, University of Texas
Edward Everett Hale
Perry Epler Gresham, Bethany College (West Virginia)
Ralph B. Tower
Raleigh Warren Holmstedt, Indiana State Teachers College
Waldo F. Mitchell
Buell Gordon Gallagher, City College of the College of the City of New York
Carl Shoup

G. Brooks Earnest, Fenn College
Marvin J. Barloon
Clarence Beverly Hilberry, Wayne University
Lawrence H. Seltzer
Alvin Duke Chandler, College of William and Mary
Charles F. Marsh
Hurst Robins Anderson, American University
Marius Farioletti

*Use of Mailing List*

The use of our mailing list to send the materials indicated was granted to the following:

UNIVERSITY OF CALIFORNIA PRESS: To send announcement of *The Role of Mergers in the Growth of Large Firms*, by J. Fred Weston.

AMERICAN INSTITUTE FOR ECONOMIC RESEARCH: To send fellowship application blanks.

PRINCETON UNIVERSITY PRESS: To announce taking over the National Bureau of Economic Research publications.

HARPER & BROTHERS: To send announcement of *Politics, Economics, and Welfare.*

ROY R. ROADCAP AND ASSOCIATES: To send circular offering educational discount on subscriptions to *World Airline Record.*

CONGRESS OF INDUSTRIAL ORGANIZATIONS: To send reprint of article by Congressman Franklin D. Roosevelt, Jr.

NEW YORK STOCK EXCHANGE: To send tax study.

PRINCETON UNIVERSITY PRESS: To send catalogue of N.B.E.R. and other Princeton University Press books.

UNIVERSITY OF CHICAGO PRESS: To send subscription offer to *Journal of Political Economy.*

THE FREE PRESS: To send announcement of *International Trade and Economic Development*, by Jacob Viner.

INSTITUTE OF LIFE INSURANCE: To send 1953 *Life Insurance Fact Book.*

S. MILLMAN: To send catalogue of books on economics.

AMERICAN MARKETING ASSOCIATION: For membership promotion.

Respectfully submitted,
JAMES WASHINGTON BELL, *Secretary*

## Exhibit I

### Publication Costs

| Papers and Proceedings | | | | Handbooks | | |
|---|---|---|---|---|---|---|
| Year* | Number of Pages | Number of Copies | Cost | Number of Pages | Number of Copies | Cost |
| 1930 | 222 | 4,300 | $1,353.91 | | | |
| 1931 | 308 | 4,300 | 1,919.18 | 88 | 4,200 | $ 589.54 |
| 1932 | 316 | 4,200 | 1,819.75 | | | |
| 1933 | 216 | 4,000 | 1,284.85 | 88 | 3,900 | 522.71 |
| 1934 | 232 | 3,700 | 1,192.91 | | | |
| 1935 | 248 | 4,000 | 1,347.88 | | | |
| 1936 | 360 | 4,200 | 2,037.90 | 58 | 4,100 | 454.36 |
| 1937 | 344 | 4,300 | 1,922.03 | | | |
| 1938 | 200 | 4,500 | 1,234.10 | 112 | 4,500 | 1,118.84† |
| 1939 | 288 | 4,600 | 1,785.91 | | | |
| 1940 | 444 | 4,900 | 2,658.12 | 108 | 5,000 | 822.58 |
| 1941 | 479 | 5,200 | 3,294.45 | | | |
| 1942 | 548 | 5,400 | 3,909.79 | 208 | 5,500 | 1,775.72† |
| 1943 | 535 | 5,500 | 3,652.56 | | | |
| 1944 | 470 | 5,800 | 3,350.40 | | | |
| | 144 | 5,900 | 1,215.22‡ | | | |
| 1945 | 536 | 6,400 | 4,502.84 | | | |
| 1946 | 960 | 6,700 | 8,149.90 | 143 | 6,900 | 2,035.71 |
| 1947 | 781 | 7,700 | 8,140.79 | | | |
| 1948 | 591 | 8,500 | 8,701.41 | 345 | 7,700 | 6,948.07† |
| 1949 | 537 | 9,500 | 7,844.50 | | | |
| 1950 | 650 | 10,100 | 9,864.76 | 41 | 9,200 | 1,163.84† |
| 1951 | 816 | 10,400 | 11,965.40 | 18 | 8,300 | 692.63† |
| 1952 | 768 | 10,700 | 13,190.83 | 11 | 8,188 | 620.09† |
| 1953 | 612 | 10,900 | 10,935.98 | 187 | 8,400 | 4,416.69 |

* This is the year of publication and pertains to the meeting of the preceding year. The figures are published in the subsequent year.

† "Who's who" volumes; 1950—"Who's who" supplement; 1951 and 1952—names and addresses supplement.

‡ Part of papers presented at annual meeting published as supplement to June number.

## Exhibit II

### Membership and Subscribers

| Class of Membership | Totals 11/30/52 | Added | Removed | Gain or *Loss* | Totals 11/30/53 |
|---|---|---|---|---|---|
| Annual | 6,544 | 611* | 473§ | 138 | 6,682 |
| Junior | 484 | 291† | 366* | *75* | 409 |
| Family | 122 | 13 | 14 | *1* | 121 |
| Complimentary | 41 | 5 | 6 | *1* | 40‡ |
| Life | 54 | 8 | — | 8 | 62 |
| Honorary | 22 | — | 1 | *1* | 21 |
| | 7,267 | 928 | 860 | 68 | 7,335 |
| Subscribers | 2,725 | 601 | 482 | 119 | 2,844 |
| Complimentary | 30 | 1 | 1 | — | 30 |
| Totals | 10,022 | 1,530 | 1,343 | 187 | 10,209 |

* Includes 147 junior members changed to annual.

† Includes 19 annual members changed to junior.

‡ Includes 6 who do not receive publications.

§ Resigned, 82; nonpayment, 308; died, 20; lack of address, 44; changed to junior members, 19.

# REPORT OF THE TREASURER FOR THE YEAR ENDING NOVEMBER 30, 1953

The comparative income and expense analysis and the statement of financial conditions presented here summarize and supplement the detailed report of the Auditor, which follows the report of the Finance Committee.

*Income and Expenses.* In the table below, all sources of income are grouped together, as are all items of expenditure, whereas the Auditor's report treats publication results separately. Results for the current year are compared with those of last year and five years ago.

COMPARATIVE RESULTS OF OPERATIONS FOR 1948, 1952, AND 1953

| | 11/30/48 | 11/30/52 | 11/30/53 |
|---|---|---|---|
| *Income* | | | |
| Membership dues | $28,003 | $41,340 | $41,970 |
| Subscriptions | 11,831 | 15,825 | 16,491 |
| Sales | 1,417 | 2,266 | 2,524 |
| Advertising | 6,829 | 7,066 | 8,019 |
| *Directory* income | 161 | — | — |
| Republications income | 1,000 | — | — |
| Sundry income | — | 973 | 63 |
| Dues and publications income | $21,238 | $67,470 | $69,067 |
| Interest | $ 1,195 | $ 1,118 | $ 1,435 |
| Dividends | 2,944 | 3,681 | 3,588 |
| Less custodian fees | *128* | *179* | *179* |
| Sales of securities (net) | 1,887 | 3,569 | 11,636 |
| Investments (less fees) | $ 5,898 | $ 8,189 | $16,480 |
| Total income | $55,139 | $75,659 | $85,547 |
| *Expenses* | | | |
| Office salaries | $10,167 | $14,537 | $15,251 |
| Other administrative expenses | 3,237 | 3,942 | 3,630 |
| Annual meeting (net) | 1,434 | *644* | 130 |
| Executive Committee | 1,124 | 1,952 | 1,939 |
| Other committee expenses | 1,148 | 758 | 1,039 |
| *Review* moving expense | — | 477 | — |
| Administrative and operating | $17,110 | $21,022 | $21,989 |
| *Review* printing | $19,046 | $24,561 | $24,292 |
| *Papers and Proceedings* printing | 8,701 | 13,191 | 10,936 |
| *Directory* printing | 7,300 | 620 | — |
| *Handbook* printing | — | — | 4,018 |
| Editorial office (*Review*): | | | |
| Contributors | 1,775 | 2,299 | 1,562 |
| Editorial and clerical salaries | 6,444 | 9,493 | 9,843 |
| Other expenses (net) | 566 | 652 | 78 |
| Publications | $43,834 | $50,816 | $50,729 |
| Total expenses | $60,943 | $71,838 | $72,718 |
| Net operating income or *loss* | $ *5,804* | $ 3,821 | $12,829 |
| Appropriations | 600 | — | — |
| Net income or *deficit* | $ *6,404* | $ 3,821 | $12,829 |

Total income from all sources (excluding grants for special purposes from outside sources) amounted to $85,547 in the fiscal year 1953, an increase of $9,888 over 1952. The difference is due, almost entirely, to profits taken from sale of securities, although slight increases in income were derived from all other items except dividends and sundry income. No proceeds were taken from republications income.

Total expenses remained about the same, at around $72,000, the cost of the 1953 *Handbook* being largely offset by the omission of a *Directory* supplement and by decreases in printing a smaller volume of the *Papers and Proceedings,* savings in contributors' stipends and other editorial expenses, and by a small profit in annual meeting operations.

A net operating income for the year of $12,829 was in large part the result of taking profit from the sale of securities, as indicated above. We have reason to feel gratified with the results.

*Financial Condition.* The accompanying balance sheet figures show the comparative status of the principal asset, liabilities, appropriated and other funds, and surplus account for the current year, last year, and five years ago.

COMPARATIVE FINANCIAL CONDITION FOR 1948, 1952, AND 1953

| | 11/30/48 | 11/30/52 | 11/30/53 |
|---|---|---|---|
| *Assets* | | | |
| Cash on deposit and on hand | $ 7,279 | $ 7,498 | $ 4,568 |
| Receivables (net) | 3,136 | 2,995 | 3,671 |
| Inventory of *Economic Essays* at nominal value | 1 | — | — |
| Prepaid expenses and inventories | 286 | 937 | 969 |
| Furniture and fixtures (net) | 398 | 1,742 | 1,817 |
| Investments at cost: | | | |
| Bonds | 33,109 | 42,313 | 68,308 |
| Stocks | 48,624 | 58,934 | 46,459 |
| Total assets | $ 92,833 | $114,419 | $125,792 |
| *Liabilities and Funds* | | | |
| Accounts payable | $ 13,705 | $ 7,797 | $ 10,590 |
| Allied Social Science Associations | 829 | — | — |
| Deferred income | 11,415 | 7,044 | 8,062 |
| Membership extension fund | 1,213 | 707 | 609 |
| Fund for proposed secretariat | 35 | — | — |
| Fund for Committee on Graduate Training in Economics | — | 2,656 | — |
| Fund for Committee on Research and Publication | — | 3,762 | 315 |
| Fund for Committee on Public Issues | — | 810 | 945 |
| Committee appropriations (not expended) | 3,892 | — | — |
| Life memberships | 3,525 | 6,225 | 7,025 |
| Total liabilities and funds | $ 34,614 | $ 29,001 | $ 27,546 |
| *Surplus* | | | |
| Balance at beginning of period | $ 64,523 | $ 81,372 | $ 85,417 |
| Transfers from life memberships | 100 | 225 | — |
| Net income or *loss* for period | *6,404* | 3,821 | 12,829 |
| Unappropriated surplus | $ 58,219 | $ 85,417 | $ 98,246 |
| Total footings | $ 92,833 | $114,419 | $125,792 |

Asset items consist of cash, receivables (chiefly unpaid dues and sales and December *Review* advertising), prepaid expenses (supplies on hand and insurance in force), furniture and fixtures (depreciated), and investments at cost (see exhibit of the investment record at the end of this report). Total assets of $125,792 show an increase of $11,374 over those of last year. This increase is reflected chiefly in a shift in the investment account. We plowed back into bonds the profit from stocks sales.

Liability items consist of accounts payable to printers, e.g., the December number of the *Review* and the *Handbook* supplement, deferred income (prepaid dues and subscriptions), life memberships (which continue to increase since we lowered the rate from $200 to $100 in 1950), and unexpended Association and other funds appropriated for specific purposes.

Funds from outside sources are now exhausted, since the purposes for which these grants were made have now been accomplished. Of the Carnegie Corporation $8,000 for *Survey* II, $1,385 was refunded. The Rockefeller grant of $16,000 for the report on "Graduate Education in Economics" was entirely exhausted on editorial and printing costs. The only appropriation made during the year for committee activities was $150 for the *Ad Hoc* Committee on Public Issues expenses.

Net worth, or surplus, after deducting liabilities and funds from total costs amounts to $85,418, which together with net income for the year of $12,829 gives us an unappropriated surplus of $98,246. This financial backlog marks a new high and gives us comfortable assurance that we can continue operations safely on the present scale, with dues and subscriptions remaining at $6.00 per annum. Surely neither present nor prospective members can object to so modest a cost for such ample returns. Nor should dues to the American Economic Association deter those with more specialized interests taking membership in allied associations. The accompanying tables show changes for selected dates in our investment portfolio and return on investments.

Respectfully submitted,

JAMES WASHINGTON BELL, *Treasurer*

INVESTMENT PORTFOLIO

| Year | At Par | Cost | | | Market |
|---|---|---|---|---|---|
| | Bonds | Bonds | Stocks | Total | Stocks and Bonds |
| 1925 | $25,000 | $24,661.75 | | $24,661.75 | |
| 1930 | 31,000 | 32,439.48 | | 32,439.48 | |
| 1933 | 33,500 | 32,962.48 | $ 3,954.23 | 36,916.71 | $31,522.50 |
| 1935 | 16,000 | 15,280.48 | 28,114.50 | 43,394.98 | 50,338.72 |
| 1940 | 25,000 | 22,519.80 | 41,155.95 | 63,675.75 | 60,553.88 |
| 1942 | 27,000 | 24,651.12 | 41,556.06 | 66,207.18 | 58,211.88 |
| 1945 | 40,000 | 36,705.95 | 44,955.81 | 81,661.76 | 103,574.76 |
| 1948 | 35,000 | 33,108.63 | 48,624.14 | 81,732.77 | 84,841.91 |
| 1950 | 35,000 | 33,108.63 | 51,978.53 | 85,087.16 | 104,177.27 |
| 1951 | 43,000 | 43,340.16 | 49,764.51 | 93,104.67 | 117,316.75 |
| 1952 | 42,000 | 42,312.67 | 58,934.00 | 101,246.67 | 130,836.02 |
| 1953 | 68,000 | 68,308.05 | 46,458.90 | 114,766.95 | 134,562.38 |

RETURN ON INVESTMENTS

| Year | Bonds | Stocks | Total | Rate of Return on Cost |
|---|---|---|---|---|
| 1925 | $1,350.00 | | $1,350.00* | |
| 1930 | 1,695.21 | | 1,695.21 | 5.22% |
| 1933 | 1,679.49 | $ 108.57 | 1,788.06 | 4.84 |
| 1935 | 1,022.96 | 680.70 | 1,703.66 | 3.92 |
| 1940 | 1,037.56 | 2,182.46 | 3,220.02 | 5.06 |
| 1942 | 1,306.49 | 2,186.17 | 3,492.66 | 5.28 |
| 1945 | 1,479.99 | 2,488.85 | 3,968.84 | 4.71 |
| 1948 | 1,194.85 | 2,944.31 | 4,139.16 | 5.06 |
| 1950 | 1,117.50 | 3,860.39 | 4,977.89 | 5.85 |
| 1951 | 1,026.30 | 4,607.67 | 5,633.97 | 6.05 |
| 1952 | 1,117.84 | 3,681.53 | 4,799.37 | 4.75 |
| 1953 | 1,435.12 | 3,587.45 | 5,022.59 | 4.36 |

* Estimated income for year.

## REPORT OF THE FINANCE COMMITTEE

December 23, 1953

*Executive Committee,*
*American Economic Association,*
*Evanston, Illinois.*

GENTLEMEN:

Our report of the investment holdings of the Association is for the fiscal year ending November 30, 1953. Changes made during the year are shown, with profit and loss resulting from the transactions, and both cost and market prices are indicated in the accompanying list of securities held. Exhibits in the Treasurer's Report immediately preceding present a historical view of the Association's investments, with cost and market prices indicated, as well as the rate of return on cost of investments. An interesting critical examination of our investment policy from 1925 to 1945 may be found in the 1947 *Proceedings,* pages 729-739. It will be noted that the stock-to-bond relationship represents a shift during the year from a rough 60:40 to a 40:60 ratio.

Total market values as of November 30, 1953, are $134,562 compared to $130,836 last year. Of the 1953 total, bonds represent $68,366 and stocks $66,195. The market figures for last year were: bonds, $41,567, and stocks, $89,269.

During the past year the following changes were made:

SALES AND PURCHASES OF BONDS AND STOCKS (11/30/52 to 11/30/53)

*Sold*

| Number of Shares or Par Value | Particulars | Cost | Selling Price | Profit or *Loss* |
|---|---|---|---|---|
| 100 | General Electric Co. | $ 2,738.19 | $ 7,123.19 | $ 4,385.00 |
| 25 | J. C. Penny Co. | 370.13 | 1,712.74 | 1,342.61 |
| 80 | Standard Oil of Indiana | 3,305.05 | 5,630.19 | 2,325.14 |
| 75 | Union Carbide and Carbon Corp. | 1,433.94 | 4,833.25 | 3,399.31 |
| 200 | rights Central and Southwest Corp.* | 7.19 | 2.07 | *5.12* |
| 100 | B. F. Goodrich Co. | 5,456.43 | 6,662.56 | 1,206.13 |
| 60 | Chas. Pfizer and Co. | 2,316.05 | 1,772.60 | *543.45* |
| 100 | Sylvania Electric Products | 4,017.44 | 3,555.00 | *462.44* |
| $5,000 | U.S. Treasury Certificate of Indebtedness, 1⅞% | 5,010.87 | 5,000.00 | *10.87* |
| | | $24,655.29 | $36,291.60 | $11,636.31 |

*Bought*

| Number of Shares or Par Value | Particulars | Cost |
|---|---|---|
| $5,000 | U.S.A., 2¼% Certif. of Indebt. | $ 5,000.00 |
| 12,000 | U.S. Treas., 2⅝% Certif. of Indebt. | 12,015.00 |
| 14,000 | U.S. Treas., 3¼%, 6/15/83-78 | 13,991.25 |
| 100 | Eastern Air Lines | 2,774.10 |
| 72½ | Household Finance Corp. | 3,393.20 |
| 10 | Peoples Gas Light and Coke | 1,000.00 |
| 4 1/00 | Gulf Oil Corp | 2.02 |
| | | $38,175.57 |

* Two hundred rights received from Central and Southwest Corp. Cost allocated to these rights, $7.19.

We have taken out of the investment account about as much as we have put in; so that on balance the changes in our holdings (whether measured by cost or market) represent capital appreciation plowed back into the fund.

In the judgment of the members of the Finance Committee, some slowing up in business was anticipated as far back as a year ago and substantial shifts in our holdings were made last May and June. We have therefore assumed a liquid, defensive position in making new investments and will remain in this position, since the expected mild recession has not yet materialized. Our government holdings consist of $35,000 of certificates due within less than a year and $29,000 long-term bonds, due 1967 to 1983.

The list of securities below reports cost of holdings and market as of November 30, 1953.

The Committee has held its usual meetings during the year and our holdings have been analyzed at intervals on three different occasions.

Respectfully submitted,

ROY C. OSGOOD, *Chairman*
C. WELLS FARNHAM
JAMES WASHINGTON BELL

LIST OF SECURITIES HELD BY THE ASSOCIATION

STOCKS

| Number of Shares of Common Stock | Issue | Cost | Approximate Market Value 11/30/53 |
|---|---|---|---|
| 100 | Aluminum Co. of America | $4,266.15 | $5,525.00 |
| 200 | Central and South West Corp. | 2,801.69 | 4,450.00 |
| 100 | Continental Can Co. | 3,714.55 | 5,700.00 |
| 100 | Eastern Air Lines | 2,774.10 | 2,350.00 |
| 134* | Gulf Oil Corp. | 3,716.99 | 6,013.25 |
| 100 | Household Finance Corp. | 4,222.32 | 4,600.00 |
| 300 | Houston Lighting and Power Co. | 3,088.53 | 8,325.00 |
| 100 | Kroger Co. | 1,851.74 | 4,300.00 |
| 50 | Monsanto Chemical Co. | 3,120.74 | 4,293.75 |
| 60 | Peoples Gas, Light and Coke Co. | 7,466.15 | 8,220.00 |
| 100 | Pillsbury Mills | 3,653.78 | 3,500.00 |
| 75 | Procter and Gamble Co. | 2,459.72 | 5,137.50 |
| 110 | Socony Vacuum Oil Co. | 3,322.44 | 3,781.25 |
| | | $46,458.90 | $66,195.75 |

BONDS

| Par Amount | Issue | Cost | Approximate Market Value 11/30/53 |
|---|---|---|---|
| $ 4,000 | Illinois Central Ry., $4\frac{3}{4}$%, due 1966 | $ 4,026.17 | $ 4,100.00 |
| 14,000 | U.S. Treasury, $3\frac{1}{4}$%, 6/15/83-78 | 13,991.25 | 14,682.50 |
| 5,000 | U.S. Treasury Certif. of Indebt., $2\frac{1}{4}$%, due 2/15/54 | 5,000.00 | 5,031.25 |
| 3,000 | U.S. Defense Bonds, Series "G" $2\frac{1}{2}$%, due 1954 | 3,000.00 | 2,976.00 |
| 8,000 | U.S. Treasury, $2\frac{3}{4}$%, Series B, due 4/1/80-75 | 8,000.00 | 7,830.00 |
| 12,000 | U.S. Treasury, $2\frac{5}{8}$%, Certif. of Indebt., due 6/1/54 | 12,015.00 | 12,075.00 |
| 7,000 | U.S. Treasury Bonds, $2\frac{1}{2}$%, due 12/15/72-67 | 7,275.63 | 6,671.88 |
| 15,000 | U.S. Treasury, "A-1953," $2\frac{1}{8}$% | 15,000.00 | 15,000.00 |
| | | $68,308.05 | $68,366.63 |
| | Stocks | 46,458.90 | 66,195.75 |
| | Total | $114,766.95 | $134,562.38 |

* The number of shares has been increased to reflect a 4 per cent stock dividend to holders of record October 23, 1953, payable December 10, 1953.

## REPORT OF THE AUDITOR

December 11, 1953

*Executive Committee*
*American Economic Association*
*Evanston, Illinois*

DEAR SIRS:

In accordance with instructions we have examined the accounts and related records of the American Economic Association for the year ended November 30, 1953, and now submit our report thereon together with the following exhibits:

| | |
|---|---|
| Statement of Financial Position—November 30, 1953 | Exhibit 1 |
| Statement of Income and Expenses for Year Ended November 30, 1953 | Exhibit 2 |

### *Results from Operations*

Net income for the year ended November 30, 1953, was $12,829 compared with the net income of $3,821 for the year ended November 30, 1952, as shown in the following summary:

| Particulars | Year Ended November 30 1952 | 1953 | Increase *Decrease* |
|---|---|---|---|
| Income: | | | |
| Dues | $41,340 | $41,970 | $ 630 |
| Interest and dividends (net) | 4,620 | 4,844 | 224 |
| Profit on sales of securities (net) | 3,569 | 11,636 | 8,067 |
| Miscellaneous income | 973 | 63 | *910* |
| Total income | $50,502 | $58,513 | $8,011 |
| Expenses: | | | |
| Publication expenses | $50,817 | $50,729 | $ *88* |
| Less—Publication income | 25,158 | 27,034 | 1,876 |
| Net publication expense | $25,659 | $23,695 | *$1,964* |
| Administrative and other operating expenses | 21,022 | 21,989 | 967 |
| Total expenses | $46,681 | $45,684 | *$ 997* |
| Net Income | $ 3,821 | $12,829 | $9,008 |

The increase in dues reflects the increase in membership during the year under review, as reported by the Secretary:

| Classification | Number of Members at November 30 1952 | 1953 |
|---|---|---|
| Regular | 6,544 | 6,682 |
| Junior | 484 | 409 |
| Family | 122 | 121 |
| Life | 54 | 62 |
| Honorary | 22 | 21 |
| Complimentary | 41 | 40 |
| Total | 7,267 | 7,335 |

Interest on bonds owned was accounted for in accordance with stated rates; dividends received on stocks were compared with amounts reported in published records of dividends paid.

Net publication expense, as shown in the following summary, amounted to $23,695 for the current year compared with $25,659 for the preceding year:

| Particulars | Year Ended November 30 1952 | 1953 | Budgetary Estimates for Year 1953 |
|---|---|---|---|
| Expenses: | | | |
| Printing of— | | | |
| *Review* | $24,561 | $24,292 | $24,700 |
| *Directory* | 620 | | |
| *Handbook* | | 4,018 | |
| *Proceedings* | 13,191 | 10,936 | |
| Editor's honorarium | 3,417 | 3,500 | 3,500 |
| Payments to contributors | 2,299 | 1,562 | 2,500 |
| Editorial clerical salaries | 6,076 | 6,343 | 6,350 |
| Editorial supplies and expenses | 730 | 493 | 600 |
| Sundry publication expenses | 77 | 415 | |
| Total expenses | $50,817 | $50,729 | |
| Less—Income: | | | |
| Subscriptions other than members | $15,825 | $16,491 | |
| Sales of copies | 2,268 | 2,524 | |
| Advertising | 7,065 | 8,019 | |
| Total income | $25,158 | $27,034 | |
| Net publication expense | $25,659 | $23,695 | |

There was a decrease of $1,964 in net publication expense (from $25,659 to $23,695) consisting of the following:

| | |
|---|---|
| Increase in subscriptions | $ 666 |
| Increase in copy sales | 256 |
| Increase in advertising | 954 |
| Decrease in expenses (net) | 88 |
| Net decrease | $1,964 |

Billings for the December, 1953, issue of the *Review* and the *Handbook* had not been made by the publishers at the time of our examination. The publishers estimated the *Review* printing to cost $6,428 and the *Handbook* $4,018 which amounts are included in the foregoing tabulation.

### *Financial Position*

Condensed statements of financial position of the Association at November 30, 1952, and 1953 are compared below:

| Assets | November 30 1952 | November 30 1953 | Increase *Decrease* |
|---|---|---|---|
| Cash on deposit and on hand | $ 7,498 | $ 4,568 | *$ 2,930* |
| Receivables (net) | 2,995 | 3,671 | 676 |
| Prepaid expenses | 936 | 969 | 33 |
| Furniture and fixtures (net) | 1,742 | 1,817 | 75 |
| Investments at cost— | | | |
| Bonds | 42,313 | 68,308 | 25,995 |
| Stocks | 58,934 | 46,459 | *12,475* |
| | $114,418 | $125,792 | $11,374 |

| Liabilities, Funds and Surplus | November 30 1952 | November 30 1953 | Increase *Decrease* |
|---|---|---|---|
| Accounts payable | $ 7,797 | $ 10,590 | $ 2,793 |
| Deferred income | 7,044 | 8,062 | 1,018 |
| Membership extension fund | 707 | 609 | *98* |
| Fund for committee on publication and research | 3,762 | 315 | *3,447* |
| Committee fund appropriated not expended | 810 | 945 | 135 |
| Fund for committee on graduate training in economics | 2,656 | | *2,656* |
| Life memberships | 6,225 | 7,025 | 800 |
| Surplus— | | | |
| Balance at beginning of year | 81,371 | 85,417 | 4,046 |
| Net income for year | 3,821 | 12,829 | 9,008 |
| Transfers from life memberships | 225 | | *225* |
| | $114,418 | $125,792 | $11,374 |

Cash on deposit was satisfactorily reconciled with balances confirmed directly to us by the depositories.

The receivables of the Association were not confirmed by correspondence with debtors. Based upon the Association's past experience the reserve for doubtful accounts appears to be adequate to cover normal losses.

Changes in the investment account were verified by the examination of brokers' invoices and other supporting data. Securities held at November 30, 1953, were confirmed directly to us by the State Bank and Trust Company of Evanston, Illinois, custodian for the Association.

Insofar as we were able to ascertain, all liabilities of the Association at November 30, 1953, are reflected in the accompanying statement of financial position and the Secretary has represented to us that to the best of his knowledge all liabilities are disclosed.

A summary of the transactions in the various funds is presented hereunder:

| Particulars | Membership Extension Fund | Committee on Graduate Training in Economics | Committee on Public Issues | Committee on Publication and Research |
|---|---|---|---|---|
| Balance November 30, 1952 .............. | $706.56 | $2,656.46 | $794.91 | $3,762.24 |
| Appropriations during year .............. | | | 150.00 | |
| Funds expended to November 30, 1953 .... | *97.60* | *2,198.24* | | *3,905.90* |
| Balance .......................... | $608.96 | $ 458.22 | $944.91 | *$ 143.66* |
| Transferred to committee on publication and research ........................ | | *458.22* | | 458.22 |
| Balance at November 30, 1953 ........... | $608.96 | | $944.91 | $ 314.56 |

We were advised that the work of the Committee on Graduate Training in Economics has been completed. In accordance with instructions from the Rockefeller Foundation the unexpended balance was transferred to the Committee on Publication and Research.

* * *

We wish to take this opportunity to express our appreciation of the courtesies and co-operation extended to our representatives during the course of the examination.

Very truly yours,

DAVID HIMMELBLAU & CO.

*Certified Public Accountants*

## EXHIBIT 1

AMERICAN ECONOMIC ASSOCIATION

STATEMENT OF FINANCIAL POSITION—NOVEMBER 30, 1953

*Assets*

| | | |
|---|---|---|
| CURRENT ASSETS: | | |
| Cash on deposit and on hand— | | |
| State Bank and Trust Company, Evanston | $ 2,950.12 | |
| National Bank of Commerce of Chicago | 1,593.04 | |
| Petty cash | 25.00 | $ 4,568.16 |
| Receivables— | | |
| *Review* advertising | $ 2,046.35 | |
| Accrued interest and dividends | 857.69 | |
| Publication sales | 336.20 | |
| Membership dues | 610.00 | |
| Sundry | 152.75 | |
| Total receivables | $ 4,002.99 | |
| Less—Reserve for doubtful accounts | 331.72 | 3,671.27 |
| Inventory of stamps and envelopes | | 543.36 |
| Unexpired insurance | | 252.71 |
| Prepaid expenses | | 173.16 |
| Total current assets | | $ 9,208.66 |
| INVESTMENTS (at cost): | | |
| Bonds | $68,308.05 | |
| Stocks | 46,458.90 | 114,766.95 |
| FURNITURE AND FIXTURES (less accumulated depreciation) | | 1,816.64 |
| Total assets | | $125,792.25 |

*Liabilities, Funds and Surplus*

| | | | |
|---|---|---|---|
| CURRENT LIABILITIES: | | | |
| Accounts payable | | | $ 10,590.53 |
| DEFERRED INCOME: | | | |
| Prepaid subscriptions | | $ 6,755.66 | |
| Prepaid dues | | 1,306.10 | 8,061.76 |
| MEMBERSHIP EXTENSION FUND | | | 608.96 |
| FUND FOR COMMITTEE ON PUBLIC ISSUES | | | 944.91 |
| FUND FOR COMMITTEE ON PUBLICATION AND RESEARCH | | | 314.56 |
| LIFE MEMBERSHIPS AND SURPLUS: | | | |
| Life memberships | | $ 7,025.00 | |
| Unappropriated surplus— | | | |
| Balance November 30, 1952 | $85,417.62 | | |
| Net income for year ended November 30, 1953 (Exhibit 2) | 12,828.91 | 98,246.53 | 105,271.53 |
| Total liabilities, funds and surplus | | | $125,792.25 |

## AUDITOR'S OPINION

*Executive Committee*
*American Economic Association:*

In our opinion, the accompanying financial statements present fairly the financial position of American Economic Association at November 30, 1953, and the results of its operations for the year ended that date, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and other auditing procedures as we considered necessary in the circumstances.

*Chicago, Illinois*
*December 11, 1953*

DAVID HIMMELBLAU & CO.
*Certified Public Accountants*

## EXHIBIT 2

AMERICAN ECONOMIC ASSOCIATION
STATEMENT OF INCOME AND EXPENSES
FOR YEAR ENDED NOVEMBER 30, 1953

| Particulars | | Amount | | |
|---|---|---|---|---|
| INCOME: | | | | |
| Dues— | | | | |
| Regular, junior and family members | | | $41,187.42 | |
| Subscribing and contributing members | | | 782.50 | $41,969.92 |
| Investments— | | | | |
| Interest on bonds | | $ 1,435.12 | | |
| Dividends | | 3,587.45 | | |
| | | $ 5,022.57 | | |
| Less—Custodian fees | | 178.69 | $ 4,843.88 | |
| Gain on sale of securities (net) | | | 11,636.31 | 16,480.19 |
| Miscellaneous income (net) | | | | 63.05 |
| Total income | | | | $58,513.16 |
| EXPENSES: | | | | |
| Administrative and other operating expenses— | | | | |
| Secretary's salary | | $ 3,500.00 | | |
| Office salaries | | 11,751.26 | | |
| Annual meeting (net) | | 129.73 | | |
| Executive committee expenses | | 1,938.93 | | |
| Other committee expenses | | 1,038.74 | | |
| Postage expense | | 910.49 | | |
| Stationery and supplies | | 1,013.12 | | |
| Insurance | | 176.04 | | |
| Provision for depreciation | | 200.34 | | |
| Telephone and telegraph | | 156.01 | | |
| Dues and expenses— | | | | |
| American Council of Learned Societies | | 100.00 | | |
| International Economic Association | | 400.00 | | |
| Exchange on checks | | 31.22 | | |
| Social security taxes | | 156.33 | | |
| Miscellaneous expense (net) | | 486.79 | $21,989.00 | |
| Publication expenses— | | | | |
| Printing of: | | | | |
| *Review* | | $24,292.33 | | |
| *Handbook* | | 4,018.00 | | |
| *Proceedings* | | 10,935.98 | | |
| Editor's honorarium | | 3,500.00 | | |
| Payments to contributors | | 1,562.50 | | |
| Editorial clerical salaries | | 6,342.88 | | |
| Editorial supplies and expense | | 492.94 | | |
| Sundry publishing expenses | | 415.23 | | |
| Total publishing expenses | | $50,729.40 | | |
| Less—Publication income: | | | | |
| Subscriptions, other than members | $16,491.32 | | | |
| Sales of copies | 2,523.51 | | | |
| Advertising | 8,019.32 | 27,034.15 | 23,695.25 | |
| Total expenses | | | | 45,684.25 |
| NET INCOME FOR YEAR ENDED NOVEMBER 30, 1953 (Exhibit 1) | | | | $12,828.91 |

## REPORT OF THE MANAGING EDITOR FOR THE YEAR ENDING DECEMBER, 1953

The number of manuscripts submitted for publication during this past year increased substantially as compared with the four preceding years, and the percentage of articles accepted decreased to the rather low figure of 15 per cent. Comparative figures are given in Table 1. The table brings out the fact that the increase in the number of manuscripts submitted has been exclusively an increase in the number of communications; and that in fact the number of articles, as distinct from communications, has actually decreased in 1953 as compared with 1952, which was also the case in 1952 as compared with 1951.

TABLE 1

MANUSCRIPTS SUBMITTED, 1949-53

| | *1949* | *1950* | *1951* | *1952* | *1953* |
|---|---|---|---|---|---|
| Manuscripts received | 200 | 197 | 222 | 190 | 234 |
| Articles | 144 | 156 | 157 | 133 | 122 |
| Communications | 56 | 41 | 65 | 57 | 112 |
| Percentage of articles accepted | 20% | 19% | 19% | 21% | 15% |

Much of the increase in the number of communications submitted is attributable to the inclusion in the 1952 volume of seven articles which turned out to be decidedly controversial and elicited a surprisingly large number of comments. Because the members of the Editorial Board recognized the importance of the resulting controversies, this rather unusual flow of communications was also reflected in the distribution of space as between articles and communications in the contents of the four numbers of the *Review* in 1953. Table 2 gives a statistical summary, together with the corresponding figures for 1951 and 1952.

TABLE 2

SUMMARY OF CONTENTS, 1951-53

| | 1953 | | 1952 | | 1951 | |
|---|---|---|---|---|---|---|
| | No. | Pages | No. | Pages | No. | Pages |
| Leading articles | 18 | 389 | 28 | 428 | 30 | 494 |
| Communications: | | | | | | |
| Original | 5 | 20 | 11 | 52 | 4 | 12 |
| Comments and replies | 28 | 112 | 8 | 25 | 15 | 63 |
| Book reviews | 161 | 339 | 173 | 349 | 148 | 293 |
| Memorials | 1 | 2 | | | | |
| Classified list of new books | | 59 | | 59 | | 62 |
| Classified list of periodical articles | | 54 | | 44 | | 37 |
| Classified list of dissertations | | 32 | | 46 | | 43 |
| Notes | | 34 | | 34 | | 36 |
| | | 1,044* | | 1,037 | | 1,043* |

* Includes blank pages.

Several aspects of this table are worth noting. In addition to the reduction of space devoted to articles as compared to last year and the increase in the space devoted to communications, there has been a more than proportionate reduction in the number of leading articles. This reflects some increase in the average length of articles as compared with the two preceding years, and is I think largely the result of our attempt to include at least a few articles reporting the results of empirical research, even though these papers of necessity are likely to be on the long side. Five such articles were included in this past volume. Two other rather necessarily long articles of an essentially expository sort were also included because of their undoubted usefulness for teaching purposes. Even though the total number of articles that we are able to publish suffers somewhat as a result, I think it is highly desirable that a substantial proportion of space in the *Review* should be available for articles based upon empirical research. Expository articles should also occasionally have a place in the *Review*.

The available space for both articles and communications has been limited also by a continuing rather high proportion of space devoted to book reviews. Even so, many books that should have been given at least a short review notice have had to be passed over. We have in particular been guilty of slighting books published abroad. In order partly to correct this situation, I suggest that it might be desirable to try the experiment of employing some additional editorial assistance (perhaps by using a small amount of time of a number of graduate students) in the preparation of, say, twenty-five or thirty short, unsigned review notes with regard to books that should receive some attention but for which there is not space for full reviews.

Some increase is also to be noted in the space devoted to the classified lists of periodical articles, which however has been more than offset by the reduction in space devoted to the classified list of dissertations. In general I do not believe it desirable to permit the space given to these two lists to increase.

An analysis of the contents of Volume XLIII shows, as in the past, a rather heavy concentration in general economic theory—eight of the eighteen major articles, and twenty-two of the thirty-three communications. There was a secondary emphasis in the fields of business fluctuations, international economics, labor economics, and monetary theory; and there were one or two papers in each of five other fields. Most of the major fields of economics were represented, although no particular effort has been made by the editors to insure that this would be the case. In contrast to last year, quite a few entirely publishable articles of reasonably good quality had to be turned away. This naturally raises the question as to whether the rather large amount of space devoted to controversial discussions in this past volume has been entirely wisely allocated in that way. When an article is provocative and when it stimulates discussion, I think that the resulting debate is more likey than not to be useful; and a certain amount of it is highly desirable. But it must be recognized, and I shall try to do so, that there may be a fairly high opportunity cost involved in terms of articles worthy of publication that are unable to achieve publication.

Table 3 presents the actual expenditures in 1953 in comparison with the estimated budget and with actual expenditures in 1952.

TABLE 3

ACTUAL AND BUDGETED EXPENDITURES

| | Budget 1953 | Actual 1953 | Actual 1952 |
|---|---|---|---|
| Printing and mailing | $24,700 | $24,618.02* | $24,471.03† |
| Editorial | 3,500 | 3,500.00 | 3,500.00 |
| Editorial Assistance | 6,350 | 6,366.88 | 6,006.86 |
| Supplies | 600 | 515.13 | 613.55 |
| Contributors | 2,500 | 2,059.00 | 2,299.00 |
| | $37,650 | $37,059.03 | $36,890.44 |

* Printing estimate December number: $6,300 plus reprints $70.00.
† Corrected from 1952 Annual Report.

In spite of the increase in the number of copies printed to 10,900 as compared with 10,800 anticipated in the budget, we were able to keep within the total budget approved a year ago. The saving that made this possible occurred in the payments to contributors and essentially resulted from the reduction in the number of articles published. Total expenditures in 1953 amounted to $37,059.03 as compared with a budgeted amount of $37,650. The actual expenditure for the *Review* the preceding year was $36,890.44. Table 4 shows the number of copies, size, and cost of printing by quarters.

TABLE 4

COPIES PRINTED, SIZE AND COST OF PRINTING

| | Copies Printed | Pages Net | Pages Gross | Cost Including Reprints | |
|---|---|---|---|---|---|
| March | 10,900 | 274 | 320 | $6,233.90 | |
| June | 10,900 | 238 | 280 | 5,684.81 | |
| September | 10,900 | 285 | 320 | 6,329.31 | |
| December | 10,900 | 248 | 300 | 6,370.00 | (Estimated) |
| | | 1,045 | 1,220 | $24,618.02 | |

The estimated costs for the coming year are presented in Table 5, based on a volume of 1,000 pages and a printing of 10,900 copies. The item for editorial assistance has been increased by $200 to implement the proposal with regard to book review notes mentioned above.

TABLE 5

RECOMMENDED BUDGET FOR 1954

| | |
|---|---|
| Printing (paper, postage, reprints, etc.) | $24,700 |
| Editor's salary | 3,500 |
| Editorial assistance | 6,550 |
| Supplies | 600 |
| Contributors | 2,500 |
| | $37,850 |

During the year, I have frequently sought the aid of members of the profession in addition to the hard-working members of the Editorial Board—partly to relieve the latter of some of the excessively heavy burden they have been carrying and partly to obtain advice of specialists in particular areas not represented on the Editorial Board. The following are the names of those who have assisted us in this way:

| | | | |
|---|---|---|---|
| J. H. Adler | J. P. Carter | S. Hoos | G. Rosenbluth |
| A. A. Alchian | C. F. Christ | L. Klein | T. Scitovsky |
| K. Arrow | C. L. Christenson | B. W. Lewis | W. F. Stolper |
| A. Bergson | E. W. Clemens | F. Machlup | L. Tarshis |
| R. L. Bishop | C. H. Danhof | A. S. Manne | J. Tobin |
| A. I. Bloomfield | W. Fellner | J. Margolis | J. Tomasevich |
| K. Boulding | R. A. Gordon | J. W. Markham | R. Vining |
| N. S. Buchanan | R. Harbeson | W. H. Nicholls | C. Wilcox |
| J. Buttrick | F. D. Holzman | E. R. Rolph | S. V. Wantrup |

Respectfully submitted,

BERNARD F. HALEY, *Managing Editor*

## REPORT OF THE COMMITTEE ON RESEARCH AND PUBLICATIONS

The newly constituted Committee devoted a good deal of attention this year to reconsidering the functions of the Committee and considering plans for the future. We sent letters to some 100 economists seeking their reactions and the reactions of their colleagues to various proposals now before the Committee and asking for other suggestions as to ways in which the Association through this Committee might assist the profession. Replies have been received from over 70 individuals, indicating a widespread interest in the work of the Committee and containing many suggestions. The Committee held an extended meeting in November and another one in December to review these replies and has several suggestions under active consideration.

In December, 1953, the Executive Committee referred to this Committee several matters, including the problem of more flexible support by the foundations for individual research.

In April the Committee submitted to the Executive Committee a proposal that the Association recommend to the Ford Foundation a program of small research grants for economists, particularly in small colleges. The Executive Committee approved the proposal in principle and appointed a Committee of the Association to be available for consultation with the Ford Foundation. While the Foundation has shown interest in the proposal, it is as yet not clear what action, if any, it may take.

The Committee has under consideration a proposal that the Association support a plan to prepare a handbook in the use and application of empirical research techniques. This plan originated with a subcommittee of the Committee on Agricultural Economics of the S.S.R.C. under the chairmanship of Earl O. Heady. The S.S.R.C. suggested to this Committee that the handbook might be of interest to a larger group of economists beyond those working in agriculture. The Committee believes that the project might be modified so as to be of interest to a larger group of economists and that if so modified the A.E.A. might serve as a co-sponsor of the project.

Six volumes of readings have been published and seem to have been well received. The volume of readings in economic history, *Enterprise and Secular Change,* edited by F. C. Lane and J. C. Riemersma, sponsored jointly with the Economic History Association and published in late 1952, has also been well received. The titles of the "Readings Series" are:

Vol. I *Readings in the Social Control of Industry*
Vol. II *Readings in Business Cycle Theory*
Vol. III *Readings in the Theory of Income Distribution*
Vol. IV *Readings in the Theory of International Trade*
Vol. V *Readings in Monetary Theory*
Vol. VI *Readings in Price Theory*
*Enterprise and Secular Change*

Plans for a volume of readings in fiscal policy are going forward. Arthur Smithies has circulated a tentative list of readings to be included for comment.

The translation of Walras' ***Elements d'Economie Pure*** by William Jaffe is in page proof and announced for spring publication. The Committee has several other translations under consideration which may be suggested if this first translation venture proves successful.

Respectfully submitted,

JOHN PERRY MILLER, *Chairman*

## REPORT OF THE *AD HOC* COMMITTEE ON FREEDOM OF TEACHING, RESEARCH, AND PUBLICATION IN ECONOMICS

For some years, the Executive Committee has been concerned with the problem of the Association's responsibility for the preservation of freedom in teaching, research, and publication. In 1947, upon its recommendation, the Association passed a resolution recording its "continued affirmation that university and college teachers must have the free and untrammeled right to select for use in their teaching and research such textbooks and related materials as they, no others, believe will promote the purposes which their courses are intended by the teachers to serve." A printed copy of this brief minute of the Association's action, without further elaboration, was mailed to the presidents, the chairmen of boards of trustees, and the chairmen of departments of economics of all American colleges and universities. At the same meeting of the Association, it was suggested that a committee, composed of past presidents, be established "to make public the position of the Association concerning academic freedom, to refer appropriate cases to the A.A.U.P., and to give their own individual judgment on specific grievances referred to the Association." (*Papers and Proceedings,* May, 1948, page 533.) In 1948, such a committee was established under the chairmanship of Professor Frederick C. Mills. In 1949, the Committee reported that it had considered only one case and found no issue of academic freedom involved. Its statement limited its concern to cases involving the right of teachers of economics to select textbooks. In the view of the Committee, "it would be unwise, and beyond our mandate, to concern ourselves with other aspects of academic freedom." (*Papers and Proceedings,* May, 1950, page 594.) In 1950, the Committee made no report. In 1951, it reported no action. The Executive Committee then voted to ask the Committee to "reconsider the general nature of the problem and present (in April, 1952) a tentative preliminary statement of general principles, together with an appropriate definition of the proper scope of academic and professional freedom." The issue at hand, said the minutes, was "whether this body should consider itself a grievance committee, passively accepting only cases presented to it, or if it should keep informed of developments, preserve a file of cases, and take the initiative in suggesting action in the interest of protecting the profession against attacks." (*Papers and Proceedings,* May, 1952, page 718.) In April, 1952, the Mills committee was discharged, with thanks, and the Executive Committee voted to constitute an *ad hoc* committee on freedom of teaching, research, and publication in economics which was asked "to draw up a statement formulating the functions of such a committee, to explore a pilot case to test out operations, and to submit a report at the December meeting." (*Papers and Proceedings,* May, 1953, page 560.) In December, 1952, no report was made, the previous action was reaffirmed, and a report called for in April, 1953. In April, there was no report, the Executive Committee repeated its previous action, and President Hoover reconstituted the *ad hoc* committee, with its present membership. This Com-

mittee has made no attempt "to explore a pilot case to test out operations" but has taken as its terms of reference the more modest assignment in President Hoover's letter "to canvass the situation and to suggest whether any action was necessary and what such action might be."

In determining a proper course of action for the American Economic Association, it might be well to consider, briefly, the policies of the other professional associations in the social sciences. The question of academic freedom has been on the agenda of the American Council of Learned Societies year after year and has come up for discussion at the annual meetings of the secretaries of the allied associations, with no action being agreed upon. Most associations have approved the formal statements issued by the American Association of University Professors and have taken the position that cases involving academic tenure should be handled by the A.A.U.P. Correspondence with the American Historical Association, the American Political Science Association, and the American Psychological Association, on the other hand, reveals that they have taken a strong and independent line.

The Psychological Association has formally adopted a lengthy statement of principles on "Psychology and Its Relation With Other Professions" of which Principle No. 6 reads as follows:

> As an autonomous profession, psychology cannot accept limitations upon the freedom of thought and action of its members other than limitations imposed by its social responsibility and by considerations of public welfare. The profession must resist moves from any source to establish non-functional restraints on the behavior of psychologists, whether in the role of teacher, researcher, administrator, or practitioner.
>
> The profession of psychology will lend every feasible assistance to any responsible member subjected to undue limitations upon his opportunity to function as a responsible teacher, scientific investigator, administrator, or practitioner.

A later declaration, not yet formally adopted by the Association, goes even further:

> When an individual psychologist believes himself to have become the victim of practices which are in violation of the principles set forth [in the statement] . . . we believe that it is the duty of his professional organization to ascertain the facts in the case and to come to his defense if it appears that his rights as a psychologist have been abrogated.

This declaration provides for an initial inquiry by officers of the association and for the possible appointment of investigating committees with the approval of its board of directors.

The psychologists' Principle No. 6, it should be noted, comes in the context of a statement on the nature of psychology as a profession that outlines the aspirations of the profession and stresses its social responsibilities. The statement constitutes, in effect, a code of ethics, its first five principles dealing with the duties of psychologists as researchers, teachers, administrators, and practitioners. The concern of the profession with such matters is to be explained, in part, at least, by the fact that some of its members are engaged in the practice of the healing arts, differentiating their function from those performed by other social scientists.

Should the American Economic Association, like the Psychological Association, undertake to prepare and publicize a declaration of principles with

respect to freedom of teaching, research, and publication? Should it undertake to investigate and report upon specific cases involving infringement of these freedoms? What other action, if any, should the Association take? These are the questions which have been raised in the discussions of the Executive Committee in the past. They are the questions to which we address ourselves below.

1. Should the Association undertake to prepare and publicize a declaration of principles of academic freedom for economists? We think not. The drafting of such a statement might be a useful exercise for members of a drafting committee and might lead to stimulating discussions at meetings of the Executive Committee and even of the Association itself. But it is unlikely that such a statement would receive wide publicity or that its adoption, in itself, would have an appreciable effect upon public opinion. The importance and requirements of freedom for economists, moreover, do not differ from those for other scholars. These matters are well covered in the Statements of Principles of Academic Freedom and Tenure issued in 1925 and 1940 by the A.A.U.P. If it is not felt that these statements go far enough, they should be strengthened for all scholars, not for economists alone. And it would be unfortunate, on the other hand, for economists to issue a statement claiming less for themselves than the A.A.U.P. has long claimed for scholars in general. Endorsement of the A.A.U.P. principles, which has been the Association's policy in the past, would appear to be the proper course.

2. Should the Association undertake to investigate and report upon specific cases involving infringement of the academic freedom of economists? Again, we think not. Such work is the special function of the A.A.U.P. It involves the use of particular skills and techniques with which the secretariat and the investigating committees of the A.A.U.P. are presumably equipped and those of the separate associations are not. Duplication of the work of the A.A.U.P. might undercut that organization and impair its possible effectiveness. In freedom and tenure disputes, moreover, scholars from several departments are likely to be involved. Separate investigating committees, representing several professional associations, would get in each other's way. Administrations might well seize upon the resulting confusion as a convenient pretext for refusing to co-operate. One committee, concerned with all the scholars involved, should have a better chance to do an effective job. And even if this were not the case, there seems to be no reason why the freedom of economists—or psychologists—should be better (or worse) protected than that of their colleagues in other disciplines. All scholars have here a common problem requiring a common approach.

We conclude, therefore, that cases involving academic freedom and tenure should be handled by the A.A.U.P. And this raises the question of the effectiveness of the A.A.U.P. The A.A.U.P. now has 40,000 members and is still growing. Its dues are large enough to provide a substantial annual budget. They could easily be raised. The Association still retains a substantial measure of prestige. Yet it is lacking in vigor and effectiveness. From all accounts obtainable, it appears that the central office is virtually paralyzed. Persons

concerned with cases of academic freedom report that they can get no answer—or acknowledgement—to their letters and telegrams. At the last annual meeting of the Association, held in Chicago in the spring of 1953, the membership rebelled against the inactivity of the central office and voted for an investigation looking toward a reorganization whereby the "failure of communications" might be rectified.

The most important step that could be taken to preserve freedom of teaching, research, and publication would be the reinvigoration of the A.A.U.P. Here, it would not appear that there is anything that the American Economic Association, as such, can do with propriety. But it should be possible for economists, working through their local A.A.U.P. chapters and through the election of members to the A.A.U.P. Council, to insist that the organization be provided with the funds, the staff, and the will to do the sort of a job it ought to do.

Assuming that the A.A.U.P. can be given new life, the American Economic Association might supplement its work in various ways. The Executive Committee or a standing committee or an *ad hoc* committee set up for the purpose, might offer its services to investigating committees of the A.A.U.P. in passing on such matters as the competence of a scholar or the objectivity of a textbook where such matters were in dispute. In cases where the effect of an A.A.U.P. report would be strengthened by an endorsement by the Executive Committee of the A.E.A., or by the Association, or by an *ad hoc* committee of eminent economists, such action might be taken, or power to appoint such committees conferred upon the Association's president.

If the A.A.U.P. continues to be ineffective, the Executive Committee might well consider the desirability of proposing to the other associations in the social sciences (and perhaps in other disciplines) the establishment of a joint secretariat to perform the function for which the A.A.U.P. was originally designed. But no such step should be taken until it becomes clear that it is impossible to reactivate the A.A.U.P.

3. What other action, if any, should the Association take with respect to freedom of teaching, research, and publication? The first difficulty one encounters in this field is the lack of knowledge concerning the nature and dimensions of the problem with which we are concerned. On October 28, 1953, in response to a letter dated September 4, the Secretary of the A.A.U.P. wired the chairman of your Committee that "as of present and during recent years, very few economists have reported academic freedom trouble." Yet one hears reports of fear and pressure to conform. It would seem desirable, as a beginning, to conduct an investigation to ascertain the facts.

The status of the profession is a matter of proper concern for the Association. Howard Bowen, in the first two chapters of his report on *Graduate Education in Economics,* discusses this question and comes to the following conclusion: "The economists of the United States are a small heterogenous group without strong professional consciousness or powerful professional organization. They face public attitudes that are often indifferent and sometimes hostile. Their status as viewed by the public is lower than that of other learned professions." (Page 33.) Mr. Bowen's conclusion suggests the need for further and continu-

ing inquiry. And the conditions affecting freedom of teaching, research, and publication are among the principal matters with which such inquiry should be concerned.

We believe that a report should be prepared each year, and published in the annual volume of *Papers and Proceedings*, on the status of the profession, including information on current attacks on freedom and apparent threats to freedom, on the conditions that promote freedom and on those that discourage it. We therefore recommend that the Executive Committee provide for the creation of a standing committee on the status of the profession to prepare such a report.

When it comes into possession of more complete and continuing information on these matters, the Association may find it desirable to consider the assumption of further responsibilities.

CLAIR WILCOX, *Chairman*
MABEL NEWCOMER
PAUL M. O'LEARY

## REPORT OF THE *AD HOC* COMMITTEE ON PUBLIC ISSUES

The *Ad Hoc* Committee on Public Issues was created to "survey the problem of reconstituting" a committee on public issues and submit a report "presenting the case for and against such a committee." The Committee made the required survey, which included study of the eleven-year record of attempts, largely unsuccessful, to get a committee on public issues created or into effective action. Neither through this process nor otherwise could the *ad hoc* Committee find a convincing case for having a regular committee on public issues. Rather its study led to the unanimous conclusion there there is a persuasive case for *not* having such a committee.

Over the years during which the matter has been under consideration, the conceptions of what a committee on public issues might do have varied somewhat, but two general lines of activity seem to have been contemplated. One of these is the mobilizing of the opinions of Association members about important public issues, either through general opinion polls or through the preparation of so-called "consensus reports" by those specially selected for expertness in dealing with the subject matter at hand. (The late C. O. Hardy prepared a comprehensive study of consensus reports which can be found in the *American Economic Review*, pages 502-508, May, 1945.) The other is the generation of reports designed to create greater popular understanding of key public issues without taking policy positions on the issues in question. The *ad hoc* Committee understood these to be the principal general lines of activity contemplated for a committee on public issues.

The charter of the Association provides that "the Association, as such, will take no partisan attitude, nor will it commit its members to any position on practical economic questions." This provision, as such, does not explicitly bar the Association from acting as a conduit for the assembly of opinions of its members on public issues. However, it reflects a determination to preserve a scientific detachment which, the *ad hoc* Committee concluded, would as a practical matter be compromised if the Association engaged either directly or indirectly in anything in the nature of opinion polling of its membership on public issues.

This, the *ad hoc* Committee felt, would be true regardless of whether the opinion polling took the form of a showing of hands pro or con on some very broad statement of sentiment or a painstaking search for consensus on a meticulously formulated issue by a select company of accredited experts on the subject matter involved. In the last analysis it would all be opinion polling which, in the view of the *ad hoc* Committee, is out of keeping with the basic character of the Association as a body dedicated to the fulfillment of scientific purposes. The *ad hoc* Committee took note of the fact that adherence to this position by the Association would not deprive the public of the fruits of enterprise in this field which, apart from anything the Association might do, is relatively well cultivated.

With reference to the other main line of activity which seems to have been

contemplated for a regular committee on public issues—the stimulation of impartial reports designed to enlarge public understanding of public issues—the *ad hoc* Committee felt both that there is a need for such activity and that it is a need to which the Association might minister without compromising its scientific purposes. In the course of the discussion of this point, it was suggested that the Association might well sponsor a popular pamphlet series on major economic issues. The possibility of having the Managing Editor of the *American Economic Review* solicit material directed to relatively elementary illumination of great public issues from time to time was also discussed. It was even suggested that the Executive Committee might wish to consider an allocation of Association funds for this purpose.

The *ad hoc* Committee did not, however, believe that a committee on public issues would make a distinctive enough contribution to education of the type in question to justify such an extension of the Association's activities. It noted that other agencies are at work in the same general field and that they do not encounter the organizational difficulties which must be overcome by an Association committee in preparing a group analysis of public issues. In this connection, tribute was paid to the late Donald Wallace, the original chairman of this *ad hoc* Committee, as one who succeeded in overcoming these difficulties in guiding to a notably successful conclusion a report on economic instability ("The Problem of Economic Instability," *American Economic Review*, September, 1950), undertaken for one of the series of committees on public issues constituted and disbanded over the past eleven years. The record for the period strongly suggests that he was almost unique in his talent and zeal.

In summary, the *ad hoc* Committee concluded that one of the two major functions contemplated for a committee on public issues cannot properly be performed by an agency of the Association and that the other major function can be better performed by other agencies, either within or without the Association. On this basis, it could find no case for reconstituting a committee on public issues. Along the way toward this conclusion, the *ad hoc* Committee considered whether a committee on public issues could help in an advisory and administrative way in handling requests for help in mobilizing the views of Association members on public issues which can confidently be expected over the years. The conclusion was that anything a special committee could do along this line the Executive Committee could do as well or better.

Members of the *ad hoc* Committee suffered a few individual twinges of uneasiness in moving toward a conclusion which, so far as the organization chart is concerned, is destructive. It eliminates a spot for a committee. At the conclusion of its study and deliberations, however, the *ad hoc* Committee was unanimous that it would actually be constructive not to reconstitute a committee on public issues.

DEXTER M. KEEZER, *Chairman*
LESTER V. CHANDLER
HAROLD M. GROVES
EDWARD S. MASON
GEORGE J. STIGLER

## REPORT OF THE *AD HOC* COMMITTEE ON ECONOMICS IN TEACHER EDUCATION

The Committee has followed, at some distance, the work of the recently established Commission on Economics in Teacher Education. The Committee members attended a meeting of the Commission in New York in March, 1953; they have received regular reports from the executive committee of the Commission; two of the Committee members participated in the Commission's Workshop in August, 1953; two members attended a meeting with Commission officers in Washington at the time of the A.E.A. annual meeting in December, 1953; and two members met with a special Commission group in New York, January 20, 1954, to consider "economics" in the Commission's program in the months ahead.

The stated functions of the Commission are (1) to bring about a wider knowledge of the structure, character, and operation of the American economy—to improve the competence of the individual, as a consumer, producer, and citizen, to deal effectively with the economic problems of our society; (2) to effect a co-operative working relationship among those professional organizations and associations concerned with the economic education and the professional preparation of teachers; (3) to identify problem areas in the field of economic education of teachers and to promote needed research; (4) to develop experimental programs for the improvement of economic education in the pre-service preparation of teachers, in "co-operating colleges"; (5) to provide staff and consultant assistance in curriculum planning, etc.; (6) to sponsor and direct a national workshop on economics in teacher education; (7) to provide field consultation service; and (8) to make available reports, materials, and publications of the Commission.

Secondary education in economics is at a low ebb. A major reason is to be found in the wholly inadequate preparation of those who are teaching economics (either in economics courses or as part of other social science courses) at the secondary level. The Commission is eager to attack this problem. It has had difficulty raising funds. At the moment it is solvent, if not prosperous. For the next few months the Commission's major function will be to determine exactly how it can work most effectively to do a job which certainly demands doing. The Association Committee will continue to observe and participate.

The chairman of the Committee accompanied Secretary James W. Bell at a meeting in Washington in September, 1953, of the Secretaries of the Constituent Societies of the American Council of Learned Societies. The sessions were concerned with standards for teacher training and recruitment. Secretary Bell reported to the group that the American Economic Association has had, throughout its life, a deep professional concern with the teaching of economics, as evidenced by committee reports and sessions of the annual meetings devoted to the subject. After a day and a half of discussion, a resolution was passed by the group, requesting the chairman to appoint a committee on the relation

of the learned societies to American education. The functions of the committee are to draw up a proposal based upon plans presented by those constituent societies of the A.C.L.S. which may be interested for study of their proper relation to American education, with special reference to the preparation and certification of teachers for secondary schools, junior colleges, and four-year colleges, and to explore possibilities of co-operation with learned societies not associated with the A.C.L.S.; and through proper channels of the A.C.L.S. to secure funds for support of such study.

Respectfully submitted,

BEN W. LEWIS, *Chairman*
A. M. MCISAAC
HORACE TAYLOR

## REPORT OF OUR REPRESENTATIVE TO THE AMERICAN COUNCIL OF LEARNED SOCIETIES

The regular annual meeting of the Council was held in Rye, N.Y., January 21-23, 1953, and during the year I have read the minutes of meetings of the Board of Directors as circulated to the delegates of constituent societies. As in recent years, since the "reorganization" which centered responsibility in the hands of the Board, the main function of the meeting of delegates is formally to approve of their acts and to comment on or discuss these, as well as to keep ourselves *au courant* with Council affairs. I have observed in earlier reports that the greatest direct value of the Council to the constituent societies in the social science fields seems to me to be rendered through the Conference of Secretaries, in which our Secretary, Professor Bell, has played a very active part and on which he is in a better position to report.

It may be in order to "remind" some readers of this report that early in the history of the A.C.L.S., the S.S.R.C. was organized, representing seven social science disciplines, of which five were already members of the A.C.L.S. In consequence, the latter has become primarily an agency for the humanities, representing some twenty constituent societies in that field. With respect to social science interests, there is supposed to be a certain division of labor between the two Councils: the S.S.R.C. represents the more "scientific" aspect of these disciplines, the A.C.L.S. the more "humanistic," which is thought to be equally real and important and fairly distinct. It must be admitted that this becomes in practice rather difficult to implement, and the relation of the A.C.L.S. to the social science organizations is somewhat vague. The two Councils participate jointly in some activities, such as those of the Conference Board of Associated Research Councils. This handles some very important matters, such as the Fulbright grants, the Roster of Scientific and Specialized Personnel and the *Current Digest of Russian Periodicals*. As far as I know, it does not report back in detail on its acts to the Councils, but delegates learn of them in part through the activities and reports of our own Board.

The main explicit function of the Council is to encourage and promote scholarship and education and publication in the fields not covered by the National Research Council and the professional aspects of education represented in the National Council on Education. Its activities are carried on by a salaried staff in its Washington office and through committees in different fields of learning. Research needs and possibilities are studied and assistance rendered in setting up projects and securing financial support, through the foundations and other possible sources. The committees report to the Council a sufficient time prior to the annual meeting for their reports to be manifolded and circulated to the delegates in advance and they are subject matter for any desired discussion at the meeting, as are extended written or oral reports of the officers of the Council and the Director and staff. The reports are also published in the annual proceedings issue of the *Bulletin* of the Council. This

is sent to all officers and the delegates and secretaries of the constituent societies as well as to libraries and other subscribers. Persons willing to take an interest are urged to consult the *Bulletin* for information on the work of the Council.

The past few years, the Council staff have also published a quarterly *News Letter*, which is sent to a mailing list of several thousand persons. The financial cost, large and overlapping membership of societies, and other obstacles have made broadcast sending to the whole underlying membership seem impracticable, but anyone so requesting will gladly be put on the list to receive it. It is unfortunate that the activities of the A.C.L.S. are not better known to this membership and an even wider public. This has been a topic for discussion at recent annual meetings, but no feasible method of publicity has so far been forthcoming. A major difficulty is the very limited attendance at business meetings of constituent societies—of which our own may be called a shining bad example. Nor is it believed that the proceedings of these meetings and those of the executive committees or other controlling boards are generally read by the members, particularly in the large social science societies such as the A.E.A.

Actually, much of the time at the annual meetings is devoted to general discussion of problems of interest to those present and suggested by any of them. In this connection, the staff experimented in the 1953 meeting with an innovation. This consisted in dividing the delegates, with members of the staff, into groups of the order of a dozen in size, each with a chairman and a *rapporteur*. Your delegate served as *rapporteur* for one of these. In an evening session, the reporters and chairmen were brought together for general discussion prior to reporting to the Council itself in a later session. This departure proved interesting and valuable.

Rather the most "serious" item to report from the meeting is the announcement made that grants for the overhead expenses of the organization, which have come chiefly from certain of the foundations, are likely to be discontinued in the not-distant future. This would mean a "crisis" indeed, and makes it urgent for all who are interested in the continuation of such activities on behalf of scholarship and teaching in the humanities and the social sciences to give earnest thought to the problem of securing the necessary support. Considerable discussion at the meeting centered on this problem and the reasons in our culture situation which cause it to arise, especially when so many other activities do not encounter similar difficulties. It is reported to be the view of foundation officials that support ought to come largely from individuals professionally interested and institutions working in these fields or from individuals interested but not members of organizations. No action seemed feasible beyond authorizing and directing the officers and staff to consider the situation and report at the next annual meeting. This was fixed for the corresponding dates in January, 1954.

Respectfully submitted,

FRANK H. KNIGHT

## NOTE ON THE CONFERENCE OF SECRETARIES

The Conference of Secretaries of the Constituent Societies has become more and more integrated as part of the over-all program of the Council. Only two sessions of the three-day conference, January 21-23, 1953, were independent, the others all being joint with the Council or as part of smaller panel discussion groups.

The ten-point agenda of the Conference of Secretaries included, in addition to the usual shop-talk on association operations, such topics as: a program to implement a more meaningful relationship between the A.C.L.S. and its constituent societies; a government questionnaire on activities of tax-exempt foundations; use of the National Register material by the societies; publication and research activities and graduate training in disciplines represented by our associations. A development leading out of these discussions was a Conference on Teacher Training and Recruitment held in Washington, D.C., September 25-26, 1953, and the establishment of a Committee on the Relation of Learned Societies to American Education (see Secretary's Report).

James Washington Bell was re-elected President of the Conference of Secretaries for another term and John H. Fisher, of the Modern Language Association, Secretary.

Respectfully submitted,

JAMES WASHINGTON BELL

## REPORT OF OUR REPRESENTATIVES TO THE SOCIAL SCIENCE RESEARCH COUNCIL

In December, 1951, the representatives of the American Economic Association reported that the Council at its September meeting had sponsored a comprehensive discussion of areas of economic research in which the Council might fruitfully concentrate its energies. At the Council's annual meeting in September, 1953, it devoted a session to the progress which has been made in the last two years. It is clear that the Council is pushing ahead vigorously in several areas of great concern to economists.

The Committee on Economic Growth under the chairmanship of Simon Kuznets has been active in promoting research in this area both here and abroad. It is planning a series of four small conferences to be held in 1954 dealing with the following topics: the influence of cities on economic growth and on cultural change in underdeveloped countries, economic criteria in the selection of investment plans affecting economic development, strategic factors in periods of rapid economic growth, and entrepreneurship and economic growth. In September, 1953, it sponsored a conference at Vanderbilt University on the state of research on the economic development of the South. As part of its objective to stimulate wider interest in research on problems of growth, the Committee is providing modest financial assistance to research in various European countries. It has concluded arrangements for an evaluation of long-run statistical data on the national income and its components in the United Kingdom and for review and revision of national income series for Sweden from 1861 to 1930. Negotiations for similar studies in Germany, Italy, and Norway are under way. The Committee has also been collaborating with the International Association for Research in Income and Wealth through preparation of papers for the Association's conference in Italy in 1953 and plans to participate in its projected conference to be held in 1955 in Denmark.

The Council established during the year a new Committee on Agricultural Economics which is actively at work. A Subcommittee on Appraisal and Planning of Research is reviewing research on the factors leading to the persistence in the United States of rural areas characterized by low agricultural productivity and low family incomes. Another subcommittee has submitted a recommendation for the preparation of a handbook on empirical techniques useful to research in agricultural economics. It is hoped that this handbook will make newer techniques of research more generally available to those of limited statistical and mathematical training. The Council has discussed with the Research and Publications Committee of the American Economic Association ways of making the handbook generally useful to economists in fields other than agriculture.

The Committee on Labor Market Research has initiated two new projects. One seeks to appraise research on human relations in industrial plants and other business enterprises during the last decade, while the second will review

recent research on union-management relationships. The final report of the Committee's survey of labor mobility in six cities has been completed under the direction of Gladys L. Palmer and is scheduled for early publication. An independent review of research on labor mobility by Herbert S. Parnes is also scheduled for early publication. Finally, a series of papers by E. Wight Bakke, Philip M. Hauser, Clark Kerr, Charles A. Meyers, and Gladys L. Palmer summarizing findings on labor mobility by themselves and their colleagues is to be published soon by the Technology Press.

The Western Committee on Regional Economic Analysis held its second conference in June, 1953. This conference was devoted primarily to the discussion of the data and the methodological tools needed for regional economic analysis. The Committee proposes to focus its 1953-54 program on a study of interregional relationships in terms of the balance of payments, flows of goods and services, financial flows, physical linkages such as transportation and communication, mobility of population, and processes of public and private decision making.

Of considerable interest to economists is the exploratory work undertaken by the Council during the year concerning possible research in two new areas: business enterprise, and full employment and inflation. In the first area a preliminary conference was held in June under the chairmanship of Howard R. Bowen which recommended that the Council undertake to define the field, review work under way, and make specific recommendations concerning action which the Council might take. Professor Bowen is making a preliminary survey as the basis for a conference in 1954. In the area of full employment and inflation, the Council requested and received from James Tobin a paper on possible approaches to research in this field which the Council might pursue.

Also of interest to economists was the 1953 Summer Institute in Mathematics for Social Scientists held at Dartmouth. This was sponsored by the Council and financed by a grant from the Behavioral Sciences Division of the Ford Foundation. Seven of the forty-one participants in the Institute were economists. This was an ambitious experiment, open to graduate students and faculty members alike, designed to equip participants in eight weeks of intensive study to formulate social science problems in mathematical form, read mathematical literature in their chosen fields, and do further work in mathematics and statistics beyond the level of the calculus. Although the Institute experienced serious problems of both substance and mechanics, it appears that the experiment was in large measure a success. The Committee on Mathematical Training of Social Scientists is now reviewing this experiment and considering plans for another institute, probably in 1955. It is to be hoped that through these institutes we shall not only succeed in training a group of social scientists in mathematics but shall also develop teaching techniques and materials which will prove useful on a wider scale.

The plans of the Committee on Census Monographs reported on last year have gone forward. Work is under way on some nineteen out of twenty-two proposed analytical monographs designed to supplement the 17th Decennial Census. Submission of several manuscripts is anticipated soon. These mono-

graphs will cover various aspects of population in the United States: families, migration, labor force, education, distribution of income, housing, structure of agriculture, geographical location of economic activity, trends in manufacturing, etc.

Council fellowships or grants awarded to economists during the year included ten research training fellowships (out of thirty-nine awards), three faculty research awards (out of six awards), six undergraduate research stipends (out of forty-one awards), and one grant-in-aid (out of twenty-five grants). The area Research Fellowship Program has been discontinued. But the other programs of fellowships and grants-in-aid will be continued.

Other activities of the Council not so directly concerned with economics are nevertheless of interest to members of the Association. The Committee on Civil-Military Relations has prepared an annotated bibliography of some six hundred titles on major problems in this field. It is also exploring areas of research in this field some of which, such as vulnerability to atomic attack, raise important economic questions. The Committee on Slavic Studies, a joint committee with the A.C.L.S., is scheduling a conference on Continuity and Change in Russian Economic Thought for March, 1954. The proceedings of the Conference on Soviet Economic Growth held under the auspices of the joint committee in May, 1952, was recently published in a volume edited by Abram Bergson entitled, *Soviet Economic Growth: Conditions and Perspectives* (Row, Peterson and Company, Evanston, Illinois, 1953).

Respectfully submitted,

JOHN PERRY MILLER

## WORK OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH IN 1953

Seven reports were published by the National Bureau in 1953. On December 31, seven were in press, six were approved and about ready to go to press, and eight were being reviewed or were about ready to be reviewed by the Board of Directors. The preparation of a number of others was effectively advanced during the period, and work on several new projects was started. A fuller description of these reports, technical and occasional papers may be obtained by writing to the National Bureau.

*Reports Published*

*The Trend of Government Activity in the United States since 1900,* by Solomon Fabricant.

*Studies in Income and Wealth,* Volume fifteen.

*Shares of Upper Income Groups in Income and Savings,* by Simon Kuznets.

*The Role of Federal Credit Aids in Residential Construction (Occasional Paper 39),* by Leo Grebler.

*A Study of Aggregate Consumption Functions (Technical Paper 8),* by Robert Ferber.

*The Volume of Corporate Bond Financing since 1900,* by W. Braddock Hickman.

*Transport and the State of Trade in Britain (Occasional Paper 40),* by Thor Hultgren.

*Reports in Press, December 31, 1953*

*Conference on Regularization of Business Investment.*

*The Frontiers of Economic Knowledge,* by Arthur F. Burns.

*Long-Range Economic Projections, Studies in Income and Wealth,* Volume Sixteen.

*Mortgage Lending Experience in Agriculture,* by Lawrence A. Jones and David Durand.

*The Volume of Residential Construction, 1889-1950 (Technical Paper),* by David M. Blank.

*Capital and Output Trends in Manufacturing Industries, 1880-1948 (Occasional Paper),* by Daniel Creamer.

*The Share of Financial Intermediaries in National Wealth and National Assets (Occasional Paper),* by Raymond W. Goldsmith.

*Reports Soon to Go to Press*

*Immigration and the Foreign Born (Occasional Paper),* by Simon Kuznets and Ernest Rubin.

*Factors Influencing Consumption: An Experimental Analysis of Shoe Buying (Technical Paper),* by Ruth P. Mack.

*Trends and Cycles in Capital Formation by United States Railroads, 1870-1950 (Occasional Paper)*, by Melville J. Ulmer.

*The Growth of Physical Capital in Agriculture, 1870-1950 (Occasional Paper)*, by Alvin S. Tostlebe.

*Minimum Price Fixing in the Bituminous Coal Industry*, by Waldo Fisher and Charles M. James.

*Personal Incomes during Business Cycles*, by Daniel Creamer.

*Short-Term Projections, Studies in Income and Wealth*, Volume Seventeen.

*New Studies Started and Planned*

New research in the field of international economic relations developed further in 1953. A project was begun that will develop index numbers of prices and quantities for the exports and imports of the United States, by commodity groups, beginning in 1869. Another project that involved construction of estimates of the Canadian balance of payments back to 1868 was completed. Plans were completed for a project on the structure of world trade and payments, and operations were begun with the aid of a special grant of funds.

Plans for a study to determine the trends in the output of the Russian economy were drawn up and a special grant of funds was obtained to conduct it.

A study of wages and productivity in the United States was planned in the summer of 1953 and work was started in the autumn. It will deal with money and real wages from 1860 to 1952 and with productivity from 1899 to 1952. An exploratory study of government debt and currency devaluation in various countries to determine the extent to which public debt has been liquidated by means of currency devaluation, inflation, etc., was undertaken in the summer of 1953.

Albert Rees and Phillip Cagan were appointed research associates for 1953-54. Mr. Rees is investigating the implications of full employment in various situations and Mr. Cagan is working in the field of business cycles.

*Universities-National Bureau Committee for Economic Research*

Two conferences under the auspices of the Universities-National Bureau Committee for Economic Research—one on capital formation and economic growth and one on policies to combat depressions—were held in autumn 1953. Plans were completed for a third conference to be devoted to measurement and behavior of unemployment to be held in 1954.

The 1953 Annual Meeting of the Conference on Research in Income and Wealth was held in October. The meeting was devoted to capital formation and the papers are now being edited and prepared for publication.

*Arrangement with Princeton University Press*

Effective April 1, 1953, the National Bureau entered into an arrangement with Princeton University Press whereby the Press will publish new books of the National Bureau and will distribute those published before that date. The

new arrangement will relieve the National Bureau of its book publishing responsibilities.

*Occasional Papers* and *Technical Papers* will continue to be published and distributed by the National Bureau as heretofore.

Contributors and subscribers to the National Bureau will continue to receive new publications to which they are entitled directly from the National Bureau. They should also continue to send orders directly to the National Bureau.

No changes in the procedure for handling contributions and subscriptions are made under the agreement with the Press.

In March, 1953, Arthur F. Burns, Director of Research, was nominated by President Eisenhower as a member of the Council of Economic Advisers and was granted a leave of absence. Solomon Fabricant was appointed Acting Director of Research in Dr. Burns's absence. Raymond W. Goldsmith was appointed a member of the staff in the autumn and will conduct the investigation of trends in the output of the Russian economy.

In June, Frederick C. Mills, because of illness, resigned as a member of the staff and of the Board of Directors by Appointment of the American Statistical Association. W. Allen Wallis was nominated to serve as Director by Appointment of the Association to succeed Mr. Mills.

Following the death of Donald H. Wallace in late September steps were taken to enlist the further participation by the American Economic Association in the National Bureau's work, and at the Annual Meeting in December, John H. Williams was nominated as a Director of the National Bureau.

Members of the Association may make suggestions relative to the work of the National Bureau either directly or through the member of the Board of the Bureau by appointment of the Association.

# PUBLICATIONS

## OF THE

# AMERICAN ECONOMIC ASSOCIATION

1954

### FIRST SERIES

***Numbers starred are sold only with the sets; the supply of those double starred is exhausted. For information apply to the Secretary.***

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| 1. | Report of Organization of the American Economic Association. Pp. 46 | $ .50 |
| 2-3. | ** Relation of the Modern Municipality to the Gas Supply. By E. J. James. Pp. 66. | .75 |
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| 5. | ** Co-operation in New England. By E. W. Bemis. Pp. 136. | .75 |
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1-2. Fourth Annual Meeting: Reports, Papers, Discussions. 1.00
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1. ** The Silver Situation in the United States. By F. W. Taussig. Pp. 118. .75
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2-3. Housing of the Poor in American Cities. By M. T. Reynolds. Pp. 132. 1.00
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Sixth Annual Meeting: Handbook and Report. Pp. 73. .50
1-2. **Progressive Taxation in Theory and Practice. By Edwin R. A. Seligman. Pp. 222. *(See 1908, No. 4.)* 1.00
3. **The Theory of Transportation. By C. H. Cooley. Pp. 148. .75
4. Sir William Petty. By Wilson Lloyd Bevan. Pp. 102. .75
5-6. Papers on Labor Problems. By J. B. Clark, C. D. Wright, D. R. Dewey, A. T. Hadley, and J. G. Brooks, Pp. 94. .75

Volume X, 1895

Seventh Annual Meeting: Handbook and Report. Pp. 183. .50
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*Note—During 1896-1899 the Association issued its publications in two series, viz., the bimonthly* Economic Studies, *and the "New Series" of larger monographs printed at irregular intervals. In 1900 it reverted to the policy of issuing its monographs, now called the "Third Series" of the publications at quarterly intervals.*

*Price per volume, $4.00.*

Volume I, 1900

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